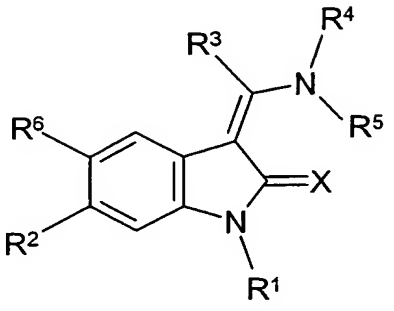
Patent Claims

1. Compounds of general formula



(I),

wherein

X denotes an oxygen or sulphur atom,

R^1 denotes a hydrogen atom, a C_{1-4}-alkoxy-carbonyl, C_{1-3}-alkyl-carbonyl, aminomethyl, C_{1-3}-alkylaminomethyl, di-(C_{1-3}-alkyl)-aminomethyl or a 5- to 7-membered cycloalkyleneiminomethyl group,

R^2 denotes a fluorine, chlorine or bromine atom or a cyano group,

R^3 denotes a phenyl or naphthyl group or

a phenyl or naphthyl group mono- or disubstituted by a fluorine, chlorine, bromine or iodine atom, by a trifluoromethyl, C_{1-3}-alkyl or C_{1-3}-alkoxy group, while in the case of disubstitution the substituents may be identical or different and the above mentioned unsubstituted as well as the mono- and disubstituted phenyl and naphthyl groups may additionally be substituted

by a fluorine, chlorine, bromine or iodine atom,

by a C_{1-3}-alkyl, C_{1-4}-alkoxy, C_{1-4}-alkoxy-carbonyl, C_{1-4}-alkoxy-carbonyl-C_{1-3}-alkoxy, C_{1-4}-alkyloxy-carbonylamino, C_{1-4}-alkoxy-carbonyl-C_{1-3}-alkylamino, C_{1-4}-alkoxy-carbonyl-C_{1-3}-alkyl-N-(C_{1-3}-alkyl)-amino, aminocarbonyl-, C_{1-3}-alkylamino-carbonyl, di-(C_{1-3}-alkyl)-amino-carbonyl, benzyloxy, carboxy, carboxy-C_{1-3}-alkoxy, carboxy-C_{1-3}-alkylamino, carboxy-C_{1-3}-alkyl-N-(C_{1-3}-alkyl)-amino, cyano, trifluoromethyl, nitro, amino, C_{4-7}-cycloalkylamino, C_{1-3}-alkyl-carbonyl-amino, *N*-(C_{1-3}-alkyl)-N-(C_{1-3}-alkyl-carbonyl)-amino, phenyl-carbonylamino, *N*-(C_{1-3}-alkyl)-*N*-(phenyl-carbonyl)-amino, benzyl-carbonylamino, *N*-(C_{1-3}-alkyl)-*N*-(benzyl-carbonyl)-amino, hydroxy, C_{1-3}-alkylsulphonylamino, *N*-(C_{1-3}-alkyl)-C_{1-3}-alkylsulphonylamino, phenylsulphonylamino, *N*-(C_{1-3}-alkyl)-phenylsulphonylamino, phenyl-C_{1-3}-alkyl-sulphonylamino, *N*-(C_{1-3}-alkyl)-*N*-(phenyl-C_{1-3}-alkyl--sulphonyl)-amino, C_{1-3}-alkylamino or di-(C_{1-3}-alkyl)-amino group,

by a C_{1-3}- or C_{4-6}-alkyl group which is substituted by a hydroxy, cyano, carboxy, C_{1-4}-alkoxy, C_{1-4}-alkoxy-carbonyl, aminocarbonyl, (C_{1-3}-alkyl-amino)-carbonyl, di-(C_{1-3}-alkyl)-aminocarbonyl, amino, C_{1-3}-alkylamino, [di-(C_{1-3}-alkyl)-amino], *N*-(C_{1-4}-alkoxy-carbonyl)-amino, *N*-(C_{1-4}-alkoxy-carbonyl)-*N*-(C_{1-3}-alkyl)-amino, phenylamino, diphenylamino, *N*-phenyl-*N*-(C_{1-3}-alkyl)-amino, benzylamino, dibenzylamino, *N*-benzyl-*N*-(C_{1-3}-alkyl)-amino, heteroarylamino, *N*-heteroaryl-*N*-(C_{1-3}-alkyl)-amino, C_{1-4}-alkyl-sulphonylamino, *N*-(C_{1-3}-alkyl)-C_{1-4}-alkylsulphonylamino, phenyl-sulphonylamino, *N*-(C_{1-3}-alkyl)-phenylsulphonylamino, phenyl-C_{1-3}-alkyl-sulphonylamino, *N*-(C_{1-3}-alkyl)-*N*-(phenyl-C_{1-3}-alkyl–sulphonyl)-amino, benzylcarbonylamino, *N*-(C_{1-3}-alkyl)-*N*-(benzylcarbonyl)-amino, phenylcarbonylamino, *N*-(C_{1-3}-alkyl)-*N*-(phenylcarbonyl)-amino, 4-(C_{1-3}-alkyl)-piperazin-1-yl-carbonyl, (C_{1-6}-alkyl-carbonyl)-amino, *N*-(C_{1-3}-alkyl)-*N*-(C_{1-6}-alkyl-carbonyl)-amino, (C_{3-7}-cycloalkyl-carbonyl)-amino, *N*-(C_{1-3}-alkyl)-*N*-(C_{3-7}-cycloalkyl-carbonyl)-amino, (C_{3-7}-cycloalkyl-C_{1-3}-alkyl-carbonyl)-amino, *N*-(C_{1-3}-alkyl)-*N*-(C_{3-7}-cycloalkyl-C_{1-3}-alkyl-carbonyl)-amino, (C_{1-4}-alkoxy-C_{1-3}-alkyl-carbonyl)-amino, *N*-(C_{1-3}-alkyl)-*N*-(C_{1-4}-alkoxy-C_{1-3}-alkyl-carbonyl)-amino, (heteroaryl-carbonyl)-amino, *N*-(C_{1-3}-alkyl)-*N*-(heteroaryl-carbonyl)-amino, (C_{3-7}-cycloalkyl-

sulphonyl)-amino, *N*-(C_{1-3}-alkyl)-*N*-(C_{3-7}-cycloalkyl-sulphonyl)-amino, (C_{3-7}-cycloalkyl-C_{1-3}-alkyl-sulphonyl)-amino, *N*-(C_{1-3}-alkyl)-*N*-(C_{3-7}-cycloalkyl-C_{1-3}-alkyl-sulphonyl)-amino, (C_{1-4}-alkoxy-C_{1-3}-alkyl-sulphonyl)-amino, *N*-(C_{1-3}-alkyl)-*N*-(C_{1-4}-alkoxy-C_{1-3}-alkyl-sulphonyl)-amino, (heteroaryl-sulphonyl)-amino, *N*-(C_{1-3}-alkyl)-*N*-(heteroaryl-sulphonyl)-amino, tetrazolyl or heteroaryl group,

by a carboxy-C_{2-3}-alkenyl, aminocarbonyl-C_{2-3}-alkenyl, (C_{1-3}-alkyl-amino)-carbonyl-C_{2-3}-alkenyl, di-(C_{1-3}-alkyl)-amino-carbonyl-C_{2-3}-alkenyl or C_{1-4}-alkoxy-carbonyl-C_{2-3}-alkenyl group,

by a heteroaryl group or

by a cycloalkyleneimino or cycloalkyleneimino-C_{1-3}-alkyl group with in each case 5 to 7 ring members, wherein in each case a methylene group linked to the imino group is replaced by a carbonyl or sulphonyl group or the two methylene groups linked to the imino group are each replaced by a carbonyl group or a
–CH_2-CH_2- group linked to the imino group is replaced by the group -O-CO-, while the carbonyl group of the –O-CO- group is linked to the imino group and a phenyl ring may be fused to the 5- to 7-membered cycloalkyleneimino group via two adjacent carbon atoms, or

by a cycloalkyleneimino, cycloalkyleneiminocarbonyl, cycloalkyleneiminosulphonyl, cycloalkyleneimino-C_{1-3}-alkyl, cycloalkyleneiminocarbonyl-C_{1-3}-alkyl or cycloalkyleneiminosulphonyl-C_{1-3}-alkyl group with 4 to 7 ring members in each case, while

in each case the methylene group in the 4 position of a 6- or 7-membered cycloalkyleneimino group may be substituted by a carboxy, C_{1-4}-alkoxy-carbonyl, aminocarbonyl, C_{1-3}-alkylaminocarbonyl, di-(C_{1-3}-alkyl)-aminocarbonyl, phenyl-C_{1-3}-alkylamino or N-(C_{1-3}-alkyl)-phenyl-C_{1-3}-alkylamino group or

may be replaced by an oxygen or sulphur atom, by a sulphinyl, sulphonyl, -NH, -N(C_{1-3}-alkyl), -N(phenyl), -N(C_{1-3}-alkyl-carbonyl) or -N(benzoyl)- group,

while the substituents may be identical or different,

R^4 denotes a benzopyrazolyl group,

a C_{3-7}-cycloalkyl group which may be substituted by a *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl-carbonyl]-amino or *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl-carbonyl]-*N*-C_{1-3}-alkyl-amino group,

while the methylene group in the 4 position of a 6- or 7-membered cycloalkyl group may be substituted by an amino, C_{1-3}-alkylamino or di-(C_{1-3}-alkyl)-amino group or replaced by a -NH or -N(C_{1-3}-alkyl) group,

or a phenyl, naphthyl or heteroaryl group substituted by the group R_9 which may additionally be mono- or disubstituted by fluorine, chlorine, bromine or iodine atoms, by C_{1-5}-alkyl, trifluoromethyl, hydroxy, C_{1-4}-alkoxy, benzyloxy, carboxy, C_{1-4}-alkoxy-carbonyl, amino, C_{1-3}-alkylamino, di-(C_{1-3}-alkyl)-amino, acetylamino, C_{1-3}-alkyl-sulphonylamino, aminocarbonyl, C_{1-3}-alkyl-aminocarbonyl, di-(C_{1-3}-alkyl)-aminocarbonyl, aminosulphonyl, C_{1-3}-alkyl-aminosulphonyl, di-(C_{1-3}-alkyl)-aminosulphonyl, nitro or cyano groups, while the substituents may be identical or different and wherein

R_9 denotes a hydrogen, fluorine, chlorine, bromine or iodine atom,

a cyano, nitro, amino, C_{1-5}-alkyl, C_{3-7}-cycloalkyl, trifluoromethyl, phenyl, tetrazolyl or heteroaryl group,

a C_{1-3}-alkyl-sulphonyl, amino-C_{1-3}-alkyl-sulphonyl, (C_{1-3}-alkylamino)-C_{1-3}-alkyl-sulphonyl or di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkylsulphonyl group,

a C_{1-4}-alkoxy group, a ω-C_{1-3}-alkoxy-C_{2-3}-alkoxy, phenyl-C_{1-3}-alkoxy, ω-amino-C_{2-3}-alkoxy, ω-(C_{1-3}-alkylamino)-C_{2-3}-alkoxy, ω-[di-(C_{1-3}-alkyl)-amino]-C_{2-3}-alkoxy, ω-(phenyl-C_{1-3}-alkylamino)-C_{2-3}-alkoxy, ω-[N-(C_{1-3}-alkyl)-phenyl-C_{1-3}-alkylamino]-C_{2-3}-alkoxy, ω-(C_{5-7}-cycloalkyleneimino)-C_{2-3}-alkoxy or C_{1-3}-alkylmercapto group,

a carboxy or C_{1-4}-alkoxy-carbonyl group, aminocarbonyl, C_{1-4}-alkyl-amino-carbonyl, N-(C_{1-5}-alkyl)-C_{1-3}-alkylaminocarbonyl, C_{3-7}-cycloalkyl-amino-carbonyl, *N*-(C_{1-5}-alkyl)-C_{3-7}-cycloalkylaminocarbonyl, (phenyl-C_{1-3}-alkyl)-amino-carbonyl, *N*-(C_{1-3}-alkyl)-phenyl-C_{1-3}-alkylamino-carbonyl group,

a C_{1-3}-alkylaminocarbonyl or *N*-(C_{1-3}-alkyl)-C_{1-3}-alkylaminocarbonyl group, wherein one or two alkyl moieties are substituted independently of one another by a nitro, cyano, carbamoyl, *N*-(C_{1-3}-alkyl)-carbamoyl, di-*N*-(C_{1-3}-alkyl)-carbamoyl, carboxy or C_{1-4}-alkoxy-carbonyl group or in the 2 or 3 position by an amino, (C_{1-3}-alkyl)-amino, di-(C_{1-3}-alkyl)-amino, (C_{1-4}-alkoxy-carbonyl)-amino, *N*-(C_{1-4}-alkoxy-carbonyl)-*N*-(C_{1-3}-alkyl)-amino, piperazino, *N*-(C_{1-3}-alkyl)-piperazino, a 4- to 7-membered cycloalkyleneimino group, a hydroxy or methoxy group,

a 4- to 7-membered cycloalkyleneiminocarbonyl group wherein

the cycloalkylene moiety may be fused to a phenyl ring via two adjacent ring atoms or may be bridged to a methylene or ethylene group via two non-adjacent ring atoms or

one or two hydrogen atoms in each case may be replaced by a C_{1-3}-alkyl group and/or

in each case the methylene group in the 4 position of a 6- or 7-membered cycloalkyleneiminocarbonyl group may be substituted by a carboxy, C_{1-4}-alkoxy-carbonyl, aminocarbonyl, C_{1-3}-alkylaminocarbonyl,

di-(C_{1-3}-alkyl)-aminocarbonyl, di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl, di-(C_{1-3}-alkyl)-amino, phenyl-C_{1-3}-alkylamino or N-(C_{1-3}-alkyl)-phenyl-C_{1-3}-alkylamino group, a hydroxy or methoxy group or

replaced by an oxygen or sulphur atom, by a sulphinyl, sulphonyl or -NH group or by a nitrogen atom, which is substituted by a C_{1-3}-alkyl, phenyl, C_{1-3}-alkyl-carbonyl, C_{1-4}-alkoxy-carbonyl, di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl, ω-hydroxy-C_{2-3}-alkyl or benzoyl group,

a 4- to 7-membered cycloalkyleneimino group wherein

a methylene group linked to the imino group by a carbonyl or sulphonyl group may be replaced or

the cycloalkylene moiety may be fused to a phenyl ring or

one or two hydrogen atoms in each case may be replaced by a C_{1-3}-alkyl group and/or

in each case the methylene group in the 4 position of a 6- or 7-membered cycloalkyleneimino group may be substituted by a carboxy, C_{1-4}-alkoxy-carbonyl, aminocarbonyl, C_{1-3}-alkylaminocarbonyl, di-(C_{1-3}-alkyl)-aminocarbonyl, phenyl-C_{1-3}-alkylamino or N-(C_{1-3}-alkyl)-phenyl-C_{1-3}-alkylamino group or

replaced by an oxygen or sulphur atom, by a sulphinyl, sulphonyl, -NH, -N(C_{1-3}-alkyl), -N(phenyl), -N(C_{1-3}-alkyl-carbonyl) or -N(benzoyl) group,

a C_{1-4}-alkyl group substituted by the group R_{10}, where

R_{10} denotes a C_{3-7}-cycloalkyl group,

while the methylene group in the 4 position of a 6- or 7-membered cycloalkyl group may be substituted by an amino, C_{1-3}-alkylamino or di-(C_{1-3}-alkyl)-amino group or replaced by a -NH or -N(C_{1-3}-alkyl) group or

in a 5- to 7-membered cycloalkyl group a -$(CH_2)_2$ group may be replaced by a -CO-NH group, a -$(CH_2)_3$ group may be replaced by a -NH-CO-NH or -CO-NH-CO group or a -$(CH_2)_4$ group may be replaced by a -NH-CO-NH-CO group, while in each case a hydrogen atom bonded to a nitrogen atom may be replaced by a C_{1-3}-alkyl group,

a phenyl, triazolyl or heteroaryl group,

a hydroxy or C_{1-4}-alkoxy group,

an amino, C_{1-7}-alkylamino, di-(C_{1-7}-alkyl)-amino, phenylamino, *N*-phenyl-*N*-(C_{1-3}-alkyl)-amino, *N*-(phenyl-C_{1-3}-alkyl)-amino, *N*-(C_{1-3}-alkyl)-*N*-(phenyl-C_{1-3}-alkyl)-amino or di-(phenyl-C_{1-3}-alkyl)-amino group,

a ω-hydroxy-C_{2-3}-alkyl-amino,
N-(C_{1-3}-alkyl)-(ω-hydroxy-C_{2-3}-alkyl)-amino,
di-(ω-hydroxy-C_{2-3}-alkyl)-amino or di-(ω-(C_{1-3}-alkoxy)-C_{2-3}-alkyl)-amino-group,

a C_{1-3}-alkyl-carbonylamino-C_{2-3}-alkyl-amino or C_{1-3}-alkyl-carbonyl-amino-C_{2-3}-alkyl-*N*-(C_{1-3}-alkyl)-amino group,

a C_{1-4}-alkyloxy-carbonyl-amino, *N*-(C_{1-4}-alkyloxy-carbonyl)-*N*-(C_{1-3}-alkyl)-amino or *N*-{ω-[*N*-(C_{1-4}-alkoxy-carbonyl)-amino]-(C_{1-4}-alkyl)}-*N*-(C_{1-3}-alkyl)-amino group,

a C_{1-3}-alkylsulphonylamino, *N*-(C_{1-3}-alkyl)-C_{1-3}-alkylsulphonylamino, C_{1-3}-alkylsulphonylamino-C_{2-3}-alkyl-amino or C_{1-3}-alkylsulphonyl-amino-C_{2-3}-alkyl-*N*-(C_{1-3}-alkyl)-amino group,

a hydroxycarbonyl-C_{1-3}-alkylamino or N-(C_{1-3}-alkyl)-hydroxycarbonyl-C_{1-3}-alkyl-amino group,

an N-(ω-amino-C_{2-3}-alkyl)-*N*-(C_{1-3}-alkyl)-amino, *N*-(ω-C_{1-3}-alkylamino-C_{2-3}-alkyl)-*N*-(C_{1-3}-alkyl)-amino, *N*-[ω-di-(C_{1-3}-alkyl)-amino-C_{2-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino, *N*-(ω-C_{1-3}-alkoxy-C_{2-3}-alkoxy-C_{1-3}-alkyl)-amino or *N*-(ω-C_{1-3}-alkoxy-C_{2-3}-alkoxy-C_{1-3}-alkyl)-*N*-(C_{1-3}-alkyl)-amino group,

a guanidino group wherein one or two hydrogen atoms may each be replaced by a C_{1-3}-alkyl group,

a C_{4-7}-cycloalkylamino, C_{4-7}-cycloalkyl-C_{1-3}-alkylamino or C_{4-7}-cycloalkenylamino group wherein position 1 of the ring does not participate in the double bond and the above mentioned groups may each additionally be substituted at the aminonitrogen atom by a C_{5-7}-cycloalkyl, C_{2-4}-alkenyl or C_{1-4}-alkyl group may,

a 4- to 7-membered cycloalkyleneimino group wherein

the cycloalkylene moiety may be fused with a phenyl group or with an oxazolo, imidazolo, thiazolo, pyridino, pyrazino or pyrimidino group optionally substituted by a fluorine, chlorine, bromine or iodine atom or by a nitro, C_{1-3}-alkyl, C_{1-3}-alkoxy or amino group and/or

one or two hydrogen atoms may each be replaced by a C_{1-3}-alkyl, C_{1-4}-alkoxy-carbonyl, amino, C_{1-3}-alkylamino or di-(C_{1-3}-alkyl)-amino group, C_{5-7}-cycloalkyl or phenyl group and/or

the methylene group in position 3 of a 5-membered cycloalkyleneimino group may be substituted by a hydroxy, hydroxy-C_{1-3}-alkyl, C_{1-4}-alkoxy or C_{1-3}-alkoxy-C_{1-3}-alkyl group,

in each case the methylene group in position 3 or 4 of a 6- or 7-membered cycloalkyleneimino group may be substituted by a hydroxy, hydroxy-C_{1-3}-alkyl, C_{1-4}-alkoxy, C_{1-4}-alkoxy-C_{1-3}-alkyl, carboxy, C_{1-4}-alkoxy-carbonyl, aminocarbonyl, C_{1-3}-alkylaminocarbonyl, di-(C_{1-3}-alkyl)-aminocarbonyl, C_{1-3}-alkylamino, di-(C_{1-3}-alkyl)-amino, *N*-(phenyl-C_{1-3}-alkyl)-amino or *N*-(C_{1-3}-alkyl)-*N*-(phenyl-C_{1-3}-alkyl)-amino group or

may be replaced by an oxygen or sulphur atom, by a sulphinyl, sulphonyl, -NH, -N(C_{1-3}-alkyl-), -N(phenyl), -N(phenyl-C_{1-3}-alkyl-), -N(C_{1-3}-alkyl-carbonyl-), -N(C_{1-4}-hydroxy-carbonyl-), -N(C_{1-4}-alkoxy-carbonyl-), -N(benzoyl-) or -N(phenyl-C_{1-3}-alkyl-carbonyl-) group,

while a methylene group linked to an imino-nitrogen atom of the cycloalkyleneimino group may be replaced by a carbonyl or sulphonyl group or in a 5- to 7-membered monocyclic cycloalkyleneimino group or a cycloalkyleneimino group fused to a phenyl group the two methylene groups linked to the imino-nitrogen atom may each be replaced by a carbonyl group,

and all the dialkylamino groups contained in the group R^{10} may also be present in quaternised form, for example as the N-methyl-(N,N-dialkyl)-ammonium group, the counter-ion preferably being selected from among iodide, chloride, bromide, methylsulphonate, para-toluenesulphonate, or trifluoroacetate,

or R_9 denotes a C_{1-4}-alkyl group which is substituted by a carboxy, C_{1-4}-alkoxy-carbonyl, aminocarbonyl, C_{1-3}-alkylaminocarbonyl, di-(C_{1-3}-alkyl)-aminocarbonyl, N-[amino-C_{1-3}-alkyl]-aminocarbonyl, N-

[(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-aminocarbonyl, N-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-aminocarbonyl, N-[amino-C_{1-3}-alkyl]-*N*-(C_{1-3}-alkyl)-aminocarbonyl, N-[(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-(C_{1-3}-alkyl)-aminocarbonyl, *N*-(C_{3-7}-cycloalkyl)-*N*-(C_{1-3}-alkyl)-amino or N-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-(C_{1-3}-alkyl)-aminocarbonyl group or by a 4- to 7-membered cycloalkyleneiminocarbonyl group,

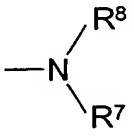
while in the above mentioned cycloalkyleneimino groups one or two hydrogen atoms may each be replaced by a C_{1-3}-alkyl, carboxy, C_{1-4}-alkoxy-carbonyl, aminocarbonyl, C_{1-3}-alkylaminocarbonyl or di-(C_{1-3}-alkyl)-aminocarbonyl group or

one or two hydrogen atoms, which are bonded to a carbon atom not adjacent to the imino group, may be replaced by an amino, C_{1-3}-alkylamino, di-(C_{1-3}-alkyl)-amino, phenyl-C_{1-3}-alkylamino or N-(C_{1-3}-alkyl)-phenyl-C_{1-3}-alkylamino group and/or

the methylene group in the 4 position of a 6- or 7-membered cycloalkyleneimino group may be replaced by one of the groups –S, –SO, -SO_2, –NH, -N(C_{1-3}-alkyl), -N(phenyl), -N(C_{1-3}-alkyl-carbonyl), -N(C_{1-4}-alkoxy-carbonyl), -N(benzoyl) or -O-,

an N-(C_{1-3}-alkyl)-C_{1-3}-alkyl-carbonyl-amino group which is additionally substituted in the alkyl moiety by a carboxy or C_{1-4}-alkoxy-carbonyl group, or

a group of formula



wherein

R^7 denotes a hydrogen atom, a C_{1-4}-alkyl or C_{3-7}-cycloalkyl group,

a C_{1-3}-alkyl group terminally substituted by a phenyl, heteroaryl, trifluoromethyl, aminocarbonyl, C_{1-4}-alkylamino-carbonyl, di-(C_{1-4}-alkyl)-amino-carbonyl, C_{1-3}-alkyl-carbonyl, C_{1-3}-alkyl-sulphonylamino, N-(C_{1-3}-alkyl)-C_{1-3}-alkyl-sulphonylamino, C_{1-3}-alkyl-aminosulphonyl or di-(C_{1-3}-alkyl)-aminosulphonyl group,

a C_{2-3}-alkyl group terminally substituted by a hydroxy or C_{1-3}-alkoxy group,

a C_{1-4}-alkyl-carbonyl, benzylcarbonyl, heteroarylcarbonyl, heteroaryl-C_{1-3}-alkyl-carbonyl, cycloalkyleneimino-C_{1-3}-alkyl-carbonyl with 5 to 7 ring atoms in the cycloalkyleneimino moiety, C_{1-3}-alkoxy-C_{1-3}-alkyl-carbonyl, amino-C_{1-3}-alkylcarbonyl, (C_{1-3}-alkyl)-amino-C_{1-3}-alkyl-carbonyl, di-(C_{1-3}-alkyl)-amino-carbonyl-C_{1-3}-alkyl, C_{1-4}-alkylsulphonyl, phenylsulphonyl, heteroarylsulphonyl, heteroaryl-C_{1-3}-alkyl-sulphonyl or benzyl-sulphonyl group or

a phenylcarbonyl group optionally substituted in the phenyl moiety by one or two methoxy groups and

R^8 denotes a C_{1-3}-alkyl, di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl-amino-carbonyl or 1-(C_{1-3}-alkyl)-piperidin-4-yl-aminocarbonyl group,

a C_{1-4}-alkyl-carbonyl group terminally substituted by a (ω-alkoxy-C_{2-3}-alkyl)-amino, C_{1-3}-alkyl-carbonyl-amino or *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino group or

a C_{2-4}-alkyl, carbonyl, C_{1-4}-alkyl-carbonyl or carbonyl-C_{1-3}-alkyl group terminally substituted by one of the groups described under R^{10},

while R^{10} additionally also denotes a C_{5-7}-cycloalkyloxy group wherein the methylene group may be substituted in the 4 position by a -NH or –N(C_{1-3}-alkyl)- group,

a 5- to 7-membered cycloalkyleneimino-amino group, while the methylene group in the 4 position of a 6- or 7-membered cycloalkyleneimino group may be substituted by a carboxy, C_{1-3}-alkoxycarbonyl, aminocarbonyl, C_{1-3}-alkylaminocarbonyl, di-(C_{1-3}-alkyl)-aminocarbonyl, phenyl-C_{1-3}-alkylamino or N-(C_{1-3}-alkyl)-phenyl-C_{1-3}-alkylamino group or

replaced by an oxygen or sulphur atom, by a sulphinyl, sulphonyl, -NH, -N(C_{1-3}-alkyl), -N(phenyl), -N(C_{1-3}-alkyl-carbonyl) or -N(benzoyl)- group,

or may denote an *N*-(heteroaryl-C_{1-3}-alkyl)-amino group,

R^5 denotes a hydrogen atom or a C_{1-3}-alkyl group and

R^6 denotes a hydrogen atom or a nitro group,

while the unsubstituted, mono- or disubstituted phenyl groups contained in the above definitions, whether singly bonded or fused on, may additionally be substituted by one or two fluorine, chlorine, bromine or iodine atoms or by one or two C_{1-5}-alkyl, C_{1-4}-alkoxy, benzyloxy, carboxy, cyano, C_{1-4}-alkoxy-carbonyl, aminocarbonyl, C_{1-4}-alkylamino-carbonyl, di-(C_{1-4}-alkyl)-amino-carbonyl, aminosulphonyl, C_{1-3}-alkyl-aminosulphonyl, di-(C_{1-3}-alkyl)-aminosulphonyl, trifluoromethyl, nitro, amino, hydroxy, C_{1-3}-alkylsulphonylamino, C_{1-3}-alkylamino or di-(C_{1-3}-alkyl)-amino groups, while the substituents may be identical or different,

the above mentioned alkyl groups including straight-chain and branched alkyl groups, wherein additionally one to 3 hydrogen atoms may be replaced by fluorine atoms,

while, unless otherwise stated, the expression a heteroaryl group refers to a monocyclic 5- or 6-membered heteroaryl group optionally substituted in the carbon skeleton by a C_{1-3}-alkyl group, wherein

the 6-membered heteroaryl group contains one, two or three nitrogen atoms and

the 5-membered heteroaryl group contains an imino group optionally substituted by a C_{1-3}-alkyl or phenyl-C_{1-3}-alkyl group, an oxygen or sulphur atom or

an imino group optionally substituted by a C_{1-3}-alkyl, amino-C_{1-3}-alkyl, C_{1-3}-alkylamino-C_{1-3}-alkyl, di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl or phenyl-C_{1-3}-alkyl group or an oxygen or sulphur atom and additionally contains a nitrogen atom or

an imino group optionally substituted by a C_{1-3}-alkyl or phenyl-C_{1-3}-alkyl group and two nitrogen atoms,

and moreover a phenyl ring may be fused to the above mentioned monocyclic heterocyclic groups via two adjacent carbon atoms and the bonding takes place via a nitrogen atom or via a carbon atom of the heterocyclic moiety or a fused-on phenyl ring,

and additionally any carboxy, amino or imino group present may be substituted by a group which can be cleaved *in vivo*, or may be present in the form of a prodrug group, e.g. in the form of a group which may be converted *in vivo* into a carboxy group or in the form of a group which may be converted *in vivo* into an imino or amino group,

the tautomers, enantiomers, diastereomers, mixtures thereof and the salts thereof,

with the exception of the compounds

(Z)-3-[1-(4-piperidinomethyl-phenylamino)-1-phenyl-methylidene]-6-chloro-2-indolinone and

(Z)-3-[1-(4-piperidinomethyl-phenylamino)-1-phenyl-methylidene]-6-bromo-2-indolinone.

2. Compounds of general formula (I) according to claim 1

wherein

X denotes an oxygen or sulphur atom,

R^1 denotes a hydrogen atom, a C_{1-4}-alkoxy-carbonyl, C_{1-3}-alkyl-carbonyl, aminomethyl, C_{1-3}-alkylaminomethyl, di-(C_{1-3}-alkyl)-aminomethyl or a 5- to 7-membered cycloalkyleneiminomethyl group,

R^2 denotes a fluorine, chlorine or bromine atom or a cyano group,

R^3 denotes a phenyl or naphthyl group or

a phenyl or naphthyl group mono- or disubstituted by a fluorine, chlorine, bromine or iodine atom, by a trifluoromethyl, C_{1-3}-alkyl or C_{1-3}-alkoxy group, while in the case of disubstitution the substituents may be identical or different and the above mentioned unsubstituted as well as the mono- and disubstituted phenyl and naphthyl groups may additionally be substituted

by a fluorine, chlorine, bromine or iodine atom,

by a C_{1-3}-alkyl, C_{1-4}-alkoxy, benzyloxy, carboxy, cyano, trifluoromethyl, nitro, amino, C_{1-3}-alkyl-carbonyl-amino, C_{1-4}-alkyloxy-carbonylamino, *N*-(C_{1-3}-alkyl)-*N*-(C_{1-3}-alkyl-carbonyl)-amino, phenyl-carbonylamino, *N*-(C_{1-3}-alkyl)-*N*-(phenyl-carbonyl)-amino, benzyl-carbonylamino, *N*-(C_{1-3}-alkyl)-*N*-(benzyl-carbonyl)-amino, hydroxy, C_{1-3}-alkylsulphonylamino, *N*-(C_{1-3}-alkyl)-*N*-(C_{1-3}-alkylsulphonyl)-amino, phenylsulphonylamino, *N*-(C_{1-3}-alkyl)-*N*-(phenylsulphonyl)-amino, benzylsulphonylamino, *N*-(C_{1-3}-alkyl)-*N*-(benzylsulphonyl)-amino, C_{1-3}-alkylamino or di-(C_{1-3}-alkyl)-amino group,

by a hydroxy-C_{1-3}-alkyl, cyano-C_{1-3}-alkyl, carboxy-C_{1-3}-alkyl, C_{1-4}-alkoxy-C_{1-3}-alkyl, amino-C_{1-3}-alkyl, C_{1-3}-alkylamino-C_{1-3}-alkyl, [di-(C_{1-3}-alkyl)-amino]-C_{1-3}-alkyl, benzylamino-C_{1-3}-alkyl, dibenzylamino-C_{1-3}-alkyl, *N*-benzyl-*N*-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl, benzylcarbonylamino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkyl)-*N*-(benzylcarbonyl)-amino-C_{1-3}-alkyl, phenylcarbonylamino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkyl)-*N*-(phenylcarbonyl)-amino-C_{1-3}-alkyl, phenylamino-C_{1-3}-alkyl, diphenylamino-C_{1-3}-alkyl, *N*-phenyl-*N*-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl, heteroarylamino-C_{1-3}-alkyl, *N*-heteroaryl-*N*-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl, C_{1-4}-alkyl-sulphonylamino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkyl)-*N*-(C_{1-4}-alkyl-sulphonyl)-amino-C_{1-3}-alkyl, phenyl-sulphonylamino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkyl)-*N*-(phenyl-sulphonyl)-amino-C_{1-3}-alkyl, benzyl-sulphonylamino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkyl)-*N*-(benzyl-sulphonyl)-amino-C_{1-3}-alkyl, C_{1-4}-alkoxy-carbonyl-C_{1-3}-alkyl, *N*-(C_{1-4}-alkoxy-carbonyl)-amino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkyl)-*N*-(C_{1-4}-alkoxy-carbonyl)-amino-C_{1-3}-alkyl, aminocarbonyl-C_{1-3}-alkyl, (C_{1-3}-alkylamino)-carbonyl-C_{1-3}-alkyl, di-(C_{1-3}-alkyl)-aminocarbonyl-C_{1-3}-alkyl, (C_{1-6}-alkyl-carbonyl)-amino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkyl)-*N*-(C_{1-6}-alkyl-carbonyl)-amino-C_{1-3}-alkyl, (C_{3-7}-cycloalkyl-carbonyl)-amino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkyl)-*N*-(C_{3-7}-cycloalkyl-carbonyl)-amino-C_{1-3}-alkyl, (C_{3-7}-cycloalkyl-C_{1-3}-alkyl-carbonyl)-amino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkyl)-*N*-(C_{3-7}-cycloalkyl-C_{1-3}-alkyl-carbonyl)-amino-C_{1-3}-alkyl, (C_{1-4}-alkoxy-C_{1-3}-alkyl-carbonyl)-amino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkyl)-*N*-(C_{1-4}-alkoxy-C_{1-3}-alkyl-carbonyl)-amino-C_{1-3}-alkyl, (heteroaryl-carbonyl)-amino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkyl)-*N*-(heteroaryl-

carbonyl)-amino-C_{1-3}-alkyl, 4-(C_{1-3}-alkyl)-piperazin-1-yl-carbonyl-(C_{1-3}-alkyl), tetrazolyl-C_{1-3}-alkyl or heteroaryl-C_{1-3}-alkyl group,

by a carboxy-C_{2-3}-alkenyl, aminocarbonyl-C_{2-3}-alkenyl, (C_{1-3}-alkyl-amino)-carbonyl-C_{2-3}-alkenyl, di-(C_{1-3}-alkylamino)-carbonyl-C_{2-3}-alkenyl or C_{1-4}-alkoxy-carbonyl-C_{2-3}-alkenyl group or

by a cycloalkyleneimino or cycloaklyleneimino-C_{1-3}-alkyl group each with 5 to 7 ring members, wherein in each case one or two methylene groups adjacent to the nitrogen atom may be replaced by a carbonyl or sulphonyl group or a $-CH_2-CH_2-$ group linked to the imino group may be replaced by the group –O-CO-, while the carbonyl group of the –O-CO- group is linked to the imino group,

while the substituents may be identical or different,

R^4 denotes a benzopyrazolyl or 1-(C_{1-3}-alkyl)-piperidin-4-yl group,

a cyclohexyl group which is substituted by a *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl-carbonyl]-amino or *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl-carbonyl]-*N*-C_{1-3}-alkyl-amino group, or

a phenyl, furyl, pyrrolyl, pyridinyl or naphthyl group, each of which is substituted in the carbon skeleton

by a fluorine, chlorine, bromine or iodine atom, by a C_{1-3}-alkyl, C_{1-4}-alkoxy, cyano, nitro, carboxy or trifluoromethyl group,

by a ω-amino-C_{2-3}-alkoxy, ω-[(C_{1-3}-alkyl)-amino]-C_{2-3}-alkoxy, ω-[di-(C_{1-3}-alkyl)-amino]-C_{2-3}-alkoxy, C_{1-3}-alkyl-sulphonyl, (C_{1-3}-alkyl)-amino-C_{1-3}-alkyl-sulphonyl, amino-C_{1-3}-alkyl-sulphonyl, di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl-sulphonyl, 4-(C_{1-3}-alkyl)-piperazino or heteroaryl group,

by a C_{1-3}-alkyl group which is terminally substituted by a carboxy, C_{1-4}-alkoxy-carbonyl, amino, C_{1-3}-alkylamino, di-(C_{1-3}-alkyl)-amino, *N*-(C_{1-3}-alkyl)-*N*-(ω-amino-C_{2-3}-alkyl)-amino, *N*-benzyl-*N*-(C_{1-3}-alkyl)-amino, *N*-[ω-(di-(C_{1-3}-alkyl)-amino)-C_{2-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino-carbonyl, *N*-(ω-hydroxy-C_{2-3}-alkyl)-*N*-(C_{1-3}-alkyl)-amino, di-(ω-hydroxy-C_{2-3}-alkyl)-amino, *N*-(ω-C_{1-3}-alkoxy-C_{2-3}-alkoxy-C_{1-3}-alkyl)-*N*-(C_{1-3}-alkyl)-amino, *N*-(C_{1-4}-alkoxy-carbonyl)-amino, *N*-(C_{1-4}-alkoxy-carbonyl)-*N*-(C_{1-3}-alkyl)-amino, *N*-{ω-[*N*-(C_{1-4}-alkoxy-carbonyl)-amino]-(C_{1-4}-alkyl)}-*N*-(C_{1-3}-alkyl)-amino, heteroaryl, triazolyl or by a 5- to 7-membered cycloalkyleneimino or cycloalkyleneiminocarbonyl group,

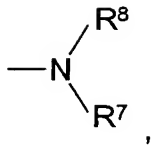
while in the above mentioned cycloalkyleneimino groups one or two hydrogen atoms may each be replaced by a C_{1-3}-alkyl, C_{1-4}-alkoxy-carbonyl, amino, C_{1-3}-alkylamino or di-(C_{1-3}-alkyl)-amino group and/or

the methylene group in the 4 position of a 6- or 7-membered cycloalkyleneimino group may be replaced by one of the groups –NH, -N(C_{1-3}-alkyl), -N(C_{1-4}-alkoxy-carbonyl) or -O-,

by a carbonyl group which is substituted by a C_{1-3}-alkoxy, *N*-[amino-C_{1-3}-alkyl]-amino, *N*-[(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-amino, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-amino, *N*-[amino-C_{1-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino, *N*-[(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino, *N*-(C_{3-7}-cycloalkyl)-*N*-(C_{1-3}-alkyl)-amino or 5- to 7-membered cycloalkyleneimino group,

while the methylene group in the 4 position of a 6- or 7-membered cycloalkylene group may be replaced by a -NH, -N(C_{1-3}-alkyl) or –N(C_{1-4}-alkyloxy-carbonyl)-group, or

by a group of formula



wherein

R^7 denotes a hydrogen atom or a C_{1-4}-alkyl, C_{1-4}-alkyl-carbonyl, benzylcarbonyl, heteroarylcarbonyl, cycloalkyleneimino-C_{1-3}-alkyl-carbonyl with 5 to 7 ring atoms in the cycloalkyleneimino moiety, C_{1-3}-alkoxy-C_{1-3}-alkyl-carbonyl, amino-C_{1-3}-alkyl-carbonyl, (C_{1-3}-alkyl)-amino-C_{1-3}-alkyl-carbonyl, di-(C_{1-3}-alkyl)-amino-carbonyl-C_{1-3}-alkyl, C_{1-4}-alkylsulphonyl, phenylsulphonyl, heteroarylsulphonyl or benzylsulphonyl group or a phenylcarbonyl group optionally substituted in the phenyl moiety by one or two methoxy groups and

R^8 denotes a C_{1-3}-alkyl group, a C_{2-4}-alkyl group terminally substituted by an amino, (C_{1-3}-alkyl)-amino, di-(C_{1-3}-alkyl)-amino or *N*-benzyl-*N*-(C_{1-3}-alkyl)-amino group, an amino-carbonyl-C_{1-3}-alkyl, (C_{1-3}-alkyl)-amino-carbonyl-C_{1-3}-alkyl or di-(C_{1-3}-alkyl)-amino-carbonyl-C_{1-3}-alkyl group,

a di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl-amino-carbonyl, 4-(C_{1-3}-alkyl)-piperazin-1-yl-carbonyl, 4-(C_{1-3}-alkyl)-piperazin-1-yl-aminocarbonyl, 1-(C_{1-3}-alkyl)-piperidin-4-yl-aminocarbonyl, 1-(C_{1-3}-alkyl)-piperidin-4-yl-oxy-carbonyl or (pyridinyl-C_{1-3}-alkyl)-aminocarbonyl group or

a C_{1-4}-alkyl-carbonyl group terminally substituted by a hydroxy, C_{1-4}-alkyloxy, amino, (C_{1-3}-alkyl)-amino, di-(C_{1-3}-alkyl)-amino, (ω-hydroxy-C_{2-3}-alkyl)-amino, di-(ω-hydroxy-C_{2-3}-alkyl)-amino, (ω-alkoxy-C_{2-3}-alkyl)-amino, di-(ω-alkoxy-C_{2-3}-alkyl)-amino, C_{1-3}-

alkyl-carbonyl-amino, *N*-benzyl-*N*-(C_{1-3}-alkyl)-amino, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino, 1-(C_{1-3}-alkyl)-piperidin-4-yl or heteroaryl group or by a 5- to 7-membered cycloalkyleneimino group,

while the cycloalkylene group may be substituted by a C_{1-3}-alkyl group and/or

one or two methylene groups linked to the imino group may be replaced by a carbonyl group and/or

the methylene group in the 4 position of a 6- or 7-membered cycloalkylimino group may be replaced by an –NH, -N(C_{1-3}-alkyl), -N(benzyl), -N(C_{1-4}-alkoxy-carbonyl) or –O- and/or

a phenyl ring may be fused via two adjacent carbon atoms of the cycloalkyleneimino group,

while a 2- or 3-linked pyrrolyl group may additionally be substituted at the nitrogen atom by a C_{1-3}-alkyl group,

R^5 denotes a hydrogen atom or a C_{1-3}-alkyl group and

R^6 denotes a hydrogen atom or a nitro group,

while the unsubstituted, mono- or disubstituted phenyl groups contained in the above definitions may additionally be substituted by a fluorine, chlorine, bromine or iodine atom or by a C_{1-3}-alkyl, C_{1-3}-alkoxy, benzyloxy, carboxy, cyano, trifluoromethyl, nitro, amino, hydroxy, C_{1-3}-alkylsulphonylamino, C_{1-3}-alkylamino or di-(C_{1-3}-alkyl)-amino group or by two methyl groups,

the above mentioned alkyl groups including straight-chain and branched alkyl groups, wherein additionally one to 3 hydrogen atoms may be replaced by fluorine atoms,

while, unless otherwise stated, the expression a heteroaryl group refers to a monocyclic 5- or 6-membered heteroaryl group optionally substituted in the carbon skeleton by a C_{1-3}-alkyl group, wherein

the 6-membered heteroaryl group contains one, two or three nitrogen atoms and

the 5-membered heteroaryl group contains an imino group optionally substituted by a C_{1-3}-alkyl or phenyl-C_{1-3}-alkyl group, an oxygen or sulphur atom or

an imino group optionally substituted by a C_{1-3}-alkyl, amino-C_{1-3}-alkyl, [(C_{1-3}-alkyl)-amino]-C_{1-3}-alkyl, [di-(C_{1-3}-alkyl)-amino]-C_{1-3}-alkyl or phenyl-C_{1-3}-alkyl group or an oxygen or sulphur atom and additionally contains a nitrogen atom or

an imino group optionally substituted by a C_{1-3}-alkyl or phenyl-C_{1-3}-alkyl group and two nitrogen atoms,

and moreover a phenyl ring may be fused to the above mentioned monocyclic heterocyclic groups via two adjacent carbon atoms and the bonding takes place via a nitrogen atom or via a carbon atom of the heterocyclic moiety or a fused-on phenyl ring,

and additionally any carboxy, amino or imino group present may be substituted by a group which can be cleaved *in vivo*,

the tautomers, enantiomers, diastereomers, mixtures thereof and the salts thereof,

with the exception of the compounds

(Z)-3-[1-(4-piperidinomethyl-phenylamino)-1-phenyl-methylidene]-6-chloro-2-indolinone and

(Z)-3-[1-(4-piperidinomethyl-phenylamino)-1-phenyl-methylidene]-6-bromo-2-indolinone.

3. Compounds of general formula (I) according to claim 1

wherein

X denotes an oxygen or sulphur atom,

R^1 denotes a hydrogen atom, a C_{1-4}-alkoxy-carbonyl, C_{1-3}-alkyl-carbonyl, aminomethyl, C_{1-3}-alkylaminomethyl, di-(C_{1-3}-alkyl)-aminomethyl or a 5- to 7-membered cycloalkyleneiminomethyl group,

R^2 denotes a fluorine, chlorine or bromine atom or a cyano group,

R^3 denotes a phenyl or naphthyl group or

a phenyl or naphthyl group mono- or disubstituted by a fluorine, chlorine, bromine or iodine atom, by a trifluoromethyl, C_{1-3}-alkyl or C_{1-3}-alkoxy group, while in the case of disubstitution the substituents may be identical or different and the above mentioned unsubstituted as well as the mono- and disubstituted phenyl and naphthyl groups may additionally be substituted

by a fluorine, chlorine, bromine or iodine atom,

by a C_{1-3}-alkyl, C_{1-4}-alkoxy, benzyloxy, carboxy, cyano, trifluoromethyl, nitro, amino, C_{1-3}-alkyl-carbonyl-amino, C_{1-4}-alkyloxy-carbonylamino,

hydroxy, C_{1-3}-alkylsulphonylamino, C_{1-3}-alkylamino or di-(C_{1-3}-alkyl)-amino group,

by a hydroxy-C_{1-3}-alkyl, cyano-C_{1-3}-alkyl, carboxy-C_{1-3}-alkyl, C_{1-4}-alkoxy-C_{1-3}-alkyl, amino-C_{1-3}-alkyl, C_{1-3}-alkylamino-C_{1-3}-alkyl, [di-(C_{1-3}-alkyl)-amino]-C_{1-3}-alkyl, benzylamino-C_{1-3}-alkyl, dibenzylamino-C_{1-3}-alkyl, *N*-benzyl-*N*-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl, benzylcarbonylamino-C_{1-3}-alkyl, phenylcarbonylamino-C_{1-3}-alkyl, phenylamino-C_{1-3}-alkyl, diphenylamino-C_{1-3}-alkyl, *N*-phenyl-*N*-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl, heteroarylamino-C_{1-3}-alkyl, *N*-heteroaryl-*N*-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl, C_{1-4}-alkyl-sulphonylamino-C_{1-3}-alkyl, phenyl-sulphonylamino-C_{1-3}-alkyl, benzyl-sulphonylamino-C_{1-3}-alkyl, C_{1-4}-alkoxy-carbonyl-C_{1-3}-alkyl, *N*-(C_{1-4}-alkoxy-carbonyl)-amino-C_{1-3}-alkyl, aminocarbonyl-C_{1-3}-alkyl, (C_{1-3}-alkylamino)-carbonyl-C_{1-3}-alkyl, di-(C_{1-3}-alkyl)-aminocarbonyl-C_{1-3}-alkyl, (C_{1-6}-alkyl-carbonyl)-amino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkyl)-*N*-(C_{1-6}-alkyl-carbonyl)-amino-C_{1-3}-alkyl, (C_{3-7}-cycloalkyl-carbonyl)-amino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkyl)-*N*-(C_{3-7}-cycloalkyl-carbonyl)-amino-C_{1-3}-alkyl, (C_{3-7}-cycloalkyl-C_{1-3}-alkyl-carbonyl)-amino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkyl)-*N*-(C_{3-7}-cycloalkyl-C_{1-3}-alkyl-carbonyl)-amino-C_{1-3}-alkyl, (C_{1-4}-alkoxy-C_{1-3}-alkyl-carbonyl)-amino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkyl)-*N*-(C_{1-4}-alkoxy-C_{1-3}-alkyl-carbonyl)-amino-C_{1-3}-alkyl, (heteroaryl-carbonyl)-amino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkyl)-*N*-(heteroaryl-carbonyl)-amino-C_{1-3}-alkyl, 4-(C_{1-3}-alkyl)-piperazin-1-yl-carbonyl-(C_{1-3}-alkyl), tetrazolyl-C_{1-3}-alkyl or imidazoyl-C_{1-3}-alkyl group,

by a carboxy-C_{2-3}-alkenyl, aminocarbonyl-C_{2-3}-alkenyl or C_{1-4}-alkoxy-carbonyl-C_{2-3}-alkenyl group or

by a 5- to 7-membered cycloalkyleneimino group wherein one or two methylene groups adjacent to the nitrogen atom may be replaced by a carbonyl group or a $-CH_2-CH_2-$ group linked to the imino group may be replaced by the group –O-CO-, while the carbonyl group of the –O-CO-group is linked to the imino group,

while the substituents may be identical or different,

R^4 denotes a benzopyrazolyl or 1-(C_{1-3}-alkyl)-piperidin-4-yl group,

a cyclohexyl group which is substituted by a *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl-carbonyl]-amino or *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl-carbonyl]-*N*-(C_{1-3}-alkyl)-amino group, or

a phenyl, furyl, pyrrolyl, pyridinyl or naphthyl group each of which may be substituted in the carbon skeleton

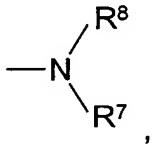
by a fluorine, chlorine, bromine or iodine atom, by a C_{1-3}-alkyl, C_{1-3}-alkoxy, cyano, nitro, carboxy or trifluoromethyl group,

by a ω-[di-(C_{1-3}-alkyl)-amino]-C_{2-3}-alkoxy, C_{1-3}-alkyl-sulphonyl, di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl-sulphonyl, 4-(C_{1-3}-alkyl)-piperazino, imidazolyl, C_{1-3}-alkyl-imidazolyl or [di-(C_{1-3}-alkyl)-amino]-C_{1-3}-alkyl-imidazolyl group,

by a C_{1-3}-alkyl group which is terminally substituted by a carboxy, C_{1-4}-alkoxy-carbonyl, amino, C_{1-3}-alkylamino, di-(C_{1-3}-alkyl)-amino, *N*-(C_{1-3}-alkyl)-*N*-(ω-amino-C_{2-3}-alkyl)-amino, *N*-benzyl-*N*-(C_{1-3}-alkyl)-amino, *N*-[ω-(di-(C_{1-3}-alkyl)-amino)-C_{2-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino-carbonyl, *N*-(ω-hydroxy-C_{2-3}-alkyl)-*N*-(C_{1-3}-alkyl)-amino, di-(ω-hydroxy-C_{2-3}-alkyl)-amino, *N*-(ω-C_{1-3}-alkoxy-C_{2-3}-alkoxy-C_{1-3}-alkyl)-*N*-(C_{1-3}-alkyl)-amino, *N*-(C_{1-4}-alkoxy-carbonyl)-amino, *N*-(C_{1-4}-alkoxy-carbonyl)-*N*-(C_{1-3}-alkyl)-amino, *N*-{ω-[*N*-(C_{1-4}-alkoxy-carbonyl)-amino]-(C_{1-4}-alkyl)}-*N*-(C_{1-3}-alkyl)-amino, pyridinyl, triazolyl, pyrrolidino, piperidino, di-(C_{1-3}-alkyl)-piperidine, [di-(C_{1-3}-alkyl)-amino]-piperidino, piperazino, morpholino, (C_{1-3}-alkyl)-piperazino, (C_{1-3}-alkyl)-piperazin-1-yl-carbonyl or 4-(C_{1-4}-alkoxy-carbonyl)-piperazino group,

by a carbonyl group which is substituted by a C_{1-4}-alkoxy, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-amino, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino, *N*-(C_{3-7}-cycloalkyl)-*N*-(C_{1-3}-alkyl)-amino, piperidino, piperazino, 4-(C_{1-4}-alkyloxy-carbonyl)-piperazino or 4-(C_{1-3}-alkyl)-piperazino group, or

by a group of formula



wherein

R^7 denotes a hydrogen atom or a C_{1-3}-alkyl, C_{1-3}-alkyl-carbonyl, benzylcarbonyl, pyridinylcarbonyl, furanylcarbonyl, pyrrolidino-C_{1-3}-alkyl-carbonyl, C_{1-3}-alkoxy-C_{1-3}-alkyl-carbonyl, di-(C_{1-3}-alkyl)-amino-carbonyl-C_{1-3}-alkyl, C_{1-4}-alkylsulphonyl or benzylsulphonyl group or a phenylcarbonyl group optionally substituted in the phenyl moiety by one or two methoxy groups and

R^8 denotes a C_{1-3}-alkyl, di-(C_{1-3}-alkyl)-amino-C_{1-4}-alkyl-amino-carbonyl or di-(C_{1-3}-alkyl)-amino-carbonyl-C_{1-3}-alkyl group,

a C_{2-3}-alkyl group terminally substituted by a di-(C_{1-3}-alkyl)-amino or *N*-benzyl-*N*-(C_{1-3}-alkyl)-amino group,

a 4-(C_{1-3}-alkyl)-piperazin-1-yl-carbonyl, 4-(C_{1-3}-alkyl)-piperazin-1-yl-aminocarbonyl, 1-(C_{1-3}-alkyl)-piperidin-4-yl-aminocarbonyl, 1-(C_{1-3}-alkyl)-piperidin-4-yl-oxy-carbonyl or (pyridinyl-C_{1-3}-alkyl)-aminocarbonyl group or

a C_{1-4}-alkyl-carbonyl group terminally substituted by a hydroxy, amino, di-(C_{1-3}-alkyl)-amino, di-(ω-hydroxy-C_{2-3}-alkyl)-amino, C_{1-3}-alkyl-carbonyl-amino, *N*-benzyl-*N*-(C_{1-3}-alkyl)-amino, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino, imidazolyl, piperazino, 4-(C_{1-3}-alkyl)-piperazin-1-yl, 4-benzyl-piperazin-1-yl, 4-(C_{1-4}-alkoxy-carbonyl)-piperazin-1-yl, 4-(C_{1-3}-alkyl)-homo-piperazin-1-yl, morpholino, pyrrolidino, piperidino, 1-(C_{1-3}-alkyl)-piperidin-4-yl, 4-(C_{1-3}-alkyl)-piperidin-1-yl or phthalimido group,

while a 2- or 3-linked pyrrolyl group may additionally be substituted at the nitrogen atom by a C_{1-3}-alkyl group,

R^5 denotes a hydrogen atom or a C_{1-3}-alkyl group and

R^6 denotes a hydrogen atom or a nitro group,

while the unsubstituted, mono- or disubstituted phenyl groups contained in the above definitions may additionally be substituted by a fluorine, chlorine, bromine or iodine atom or by a C_{1-3}-alkyl, C_{1-3}-alkoxy, benzyloxy, carboxy, cyano, trifluoromethyl, nitro, amino, hydroxy, C_{1-3}-alkylsulphonylamino, C_{1-3}-alkylamino or di-(C_{1-3}-alkyl)-amino group or by two methyl groups,

the above mentioned alkyl groups including straight-chain and branched alkyl groups, wherein additionally one to 3 hydrogen atoms may be replaced by fluorine atoms,

while, unless otherwise stated, the expression a heteroaryl group refers to a monocyclic 5- or 6-membered heteroaryl group optionally substituted in the carbon skeleton by a C_{1-3}-alkyl group, wherein

the 6-membered heteroaryl group contains one, two or three nitrogen atoms and

the 5-membered heteroaryl group contains an imino group optionally substituted by a C_{1-3}-alkyl or phenyl-C_{1-3}-alkyl group, an oxygen or sulphur atom or

an imino group optionally substituted by a C_{1-3}-alkyl or phenyl-C_{1-3}-alkyl group or an oxygen or sulphur atom and additionally a nitrogen atom or

an imino group optionally substituted by a C_{1-3}-alkyl or phenyl-C_{1-3}-alkyl group and two nitrogen atoms,

and moreover a phenyl ring may be fused to the above mentioned monocyclic heterocyclic groups via two adjacent carbon atoms and the bonding takes place via a nitrogen atom or via a carbon atom of the heterocyclic moiety or a fused-on phenyl ring,

and additionally any carboxy, amino or imino group present may be substituted by a group which can be cleaved *in vivo*,

the tautomers, enantiomers, diastereomers, mixtures thereof and the salts thereof,

with the exception of the compounds

(Z)-3-[1-(4-piperidinomethyl-phenylamino)-1-phenyl-methylidene]-6-chloro-2-indolinone and

(Z)-3-[1-(4-piperidinomethyl-phenylamino)-1-phenyl-methylidene]-6-bromo-2-indolinone.

4. Compounds of general formula I according to claim 1, wherein

R^1, R^2, R^3, R^5, R^6 and X are defined as in claim 3 and

R^4 denotes a benzopyrazolyl or 1-(C_{1-3}-alkyl)-piperidin-4-yl group,

a cyclohexyl group which is substituted by an *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl-carbonyl]-amino or *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl-carbonyl]-*N*-C_{1-3}-alkyl-amino group, or

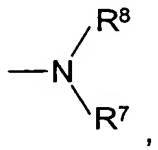
a phenyl, furyl, pyrrolyl, pyridinyl or naphthyl group, each of which may be substituted in the carbon skeleton

by a fluorine, chlorine, bromine or iodine atom, by a C_{1-3}-alkyl, C_{1-3}-alkoxy, cyano, nitro, carboxy or trifluoromethyl group,

by a ω-[di-(C_{1-3}-alkyl)-amino]-C_{2-3}-alkoxy, C_{1-3}-alkyl-sulphonyl, di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl-sulphonyl, 4-(C_{1-3}-alkyl)-piperazino, imidazolyl, C_{1-3}-alkyl-imidazolyl or [di-(C_{1-3}-alkyl)-amino]-C_{1-3}-alkyl-imidazolyl group,

by a carbonyl group which is substituted by a C_{1-4}-alkoxy, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-amino, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-C_{1-3}-alkyl-amino, *N*-(C_{3-7}-cycloalkyl)-*N*-(C_{1-3}-alkyl)-amino, piperidino, piperazino, 4-(C_{1-4}-alkyloxy-carbonyl)-piperazino or 4-(C_{1-3}-alkyl)-piperazino group, or

by a group of formula



wherein

R^7 denotes a hydrogen atom or a C_{1-3}-alkyl, C_{1-3}-alkyl-carbonyl, benzylcarbonyl, pyridinylcarbonyl, furanylcarbonyl, pyrrolidino-C_{1-3}-alkyl-carbonyl, C_{1-3}-alkoxy-C_{1-3}-alkyl-carbonyl, di-(C_{1-3}-alkyl)-

amino-carbonyl-C_{1-3}-alkyl, C_{1-4}-alkylsulphonyl or benzylsulphonyl group or a phenylcarbonyl group optionally substituted in the phenyl moiety by one or two methoxy groups and

R^8 denotes a C_{1-3}-alkyl, di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl-amino-carbonyl or di-(C_{1-3}-alkyl)-amino-carbonyl-C_{1-3}-alkyl group,

a C_{2-3}-alkyl group terminally substituted by a di-(C_{1-3}-alkyl)-amino or *N*-benzyl-*N*-(C_{1-3}-alkyl)-amino group,

a 4-(C_{1-3}-alkyl)-piperazin-1-yl-carbonyl, 4-(C_{1-3}-alkyl)-piperazin-1-yl-aminocarbonyl, 1-(C_{1-3}-alkyl)-piperidin-4-yl-aminocarbonyl, 1-(C_{1-3}-alkyl)-piperidin-4-yl-oxy-carbonyl or (pyridinyl-C_{1-3}-alkyl)-aminocarbonyl group or

a C_{1-4}-alkyl-carbonyl group terminally substituted by a hydroxy, amino, di-(C_{1-3}-alkyl)-amino, di-(ω-hydroxy-C_{2-3}-alkyl)-amino, C_{1-3}-alkyl-carbonyl-amino, *N*-benzyl-*N*-(C_{1-3}-alkyl)-amino, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino, imidazolyl, piperazino, 4-(C_{1-3}-alkyl)-piperazin-1-yl, 4-benzyl-piperazin-1-yl, 4-(C_{1-4}-alkoxy-carbonyl)-piperazin-1-yl, 4-(C_{1-3}-alkyl)-homo-piperazin-1-yl, morpholino, pyrrolidino, piperidino, 1-(C_{1-3}-alkyl)-piperidin-4-yl, 4-(C_{1-3}-alkyl)-piperidin-1-yl or phthalimido group,

while a 2- or 3-linked pyrrolyl group may additionally be substituted at the nitrogen atom by a C_{1-3}-alkyl group,

while the unsubstituted, mono- or disubstituted phenyl groups contained in the above definitions may additionally be substituted by a fluorine, chlorine, bromine or iodine atom or by a C_{1-3}-alkyl, C_{1-3}-alkoxy, benzyloxy, carboxy, cyano, trifluoromethyl, nitro, amino, hydroxy, C_{1-3}-alkylsulphonylamino, C_{1-3}-alkylamino or di-(C_{1-3}-alkyl)-amino group or by two methyl groups,

the above mentioned alkyl groups including straight-chain and branched alkyl groups, wherein additionally one to 3 hydrogen atoms may be replaced by fluorine atoms,

while, unless otherwise stated, the expression a heteroaryl group refers to a monocyclic 5- or 6-membered heteroaryl group optionally substituted in the carbon skeleton by a C_{1-3}-alkyl group, wherein

the 6-membered heteroaryl group contains one, two or three nitrogen atoms and

the 5-membered heteroaryl group contains an imino group optionally substituted by a C_{1-3}-alkyl or phenyl-C_{1-3}-alkyl group, an oxygen or sulphur atom or

an imino group optionally substituted by a C_{1-3}-alkyl or phenyl-C_{1-3}-alkyl group or an oxygen or sulphur atom and additionally a nitrogen atom or

an imino group optionally substituted by a C_{1-3}-alkyl or phenyl-C_{1-3}-alkyl group and two nitrogen atoms,

and moreover a phenyl ring may be fused to the above mentioned monocyclic heterocyclic groups via two adjacent carbon atoms and the bonding takes place via a nitrogen atom or via a carbon atom of the heterocyclic moiety or a fused-on phenyl ring,

and additionally any carboxy, amino or imino group present may be substituted by a group which can be cleaved *in vivo*,

the tautomers, enantiomers, diastereomers, mixtures thereof and the salts thereof.

5. Compounds of general formula I according to claim 3, wherein

R^1, R^2, R^4, R^5, R^6 and X are defined as in claim 3 and

R^3 denotes a phenyl or naphthyl group or

a phenyl or naphthyl group mono- or disubstituted by a fluorine, chlorine, bromine or iodine atom, by a trifluoromethyl, C_{1-3}-alkyl or C_{1-3}-alkoxy group, while in the case of disubstitution the substituents may be identical or different and the above mentioned unsubstituted as well as the mono- and disubstituted phenyl and naphthyl groups may additionally be substituted

by a fluorine, chlorine, bromine or iodine atom,

by a C_{1-3}-alkyl, C_{1-4}-alkoxy, benzyloxy, carboxy, cyano, trifluoromethyl, nitro, amino, C_{1-3}-alkyl-carbonyl-amino, C_{1-4}-alkyloxy-carbonylamino, hydroxy, C_{1-3}-alkylsulphonylamino, C_{1-3}-alkylamino or di-(C_{1-3}-alkyl)-amino group,

by a hydroxy-C_{1-3}-alkyl, cyano-C_{1-3}-alkyl, carboxy-C_{1-3}-alkyl, C_{1-4}-alkoxy-C_{1-3}-alkyl, amino-C_{1-3}-alkyl, C_{1-3}-alkylamino-C_{1-3}-alkyl, [di-(C_{1-3}-alkyl)-amino]-C_{1-3}-alkyl, benzylamino-C_{1-3}-alkyl, dibenzylamino-C_{1-3}-alkyl, *N*-benzyl-*N*-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl, benzylcarbonylamino-C_{1-3}-alkyl, phenylcarbonylamino-C_{1-3}-alkyl, phenylamino-C_{1-3}-alkyl, diphenylamino-C_{1-3}-alkyl, *N*-phenyl-*N*-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl, heteroarylamino-C_{1-3}-alkyl, *N*-heteroaryl-*N*-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl, C_{1-4}-alkyl-sulphonylamino-C_{1-3}-alkyl, phenyl-sulphonylamino-C_{1-3}-alkyl, benzyl-sulphonylamino-C_{1-3}-alkyl, C_{1-4}-alkoxy-carbonyl-C_{1-3}-alkyl, *N*-(C_{1-4}-alkoxy-carbonyl)-amino-C_{1-3}-alkyl, aminocarbonyl-C_{1-3}-alkyl, (C_{1-3}-alkylamino)-carbonyl-C_{1-3}-alkyl, di-(C_{1-3}-alkyl)-aminocarbonyl-C_{1-3}-alkyl, (C_{1-6}-alkyl-carbonyl)-amino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkyl)-*N*-(C_{1-6}-alkyl-carbonyl)-amino-C_{1-3}-alkyl, (C_{3-7}-cycloalkyl-carbonyl)-amino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkyl)-*N*-(C_{3-7}-cycloalkyl-carbonyl)-amino-C_{1-3}-alkyl, (C_{3-7}-cycloalkyl-C_{1-3}-alkyl-carbonyl)-amino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkyl)-*N*-(C_{3-7}-

cycloalkyl-C_{1-3}-alkyl-carbonyl)-amino-C_{1-3}-alkyl, (C_{1-4}-alkoxy-C_{1-3}-alkyl-carbonyl)-amino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkyl)-*N*-(C_{1-4}-alkoxy-C_{1-3}-alkyl-carbonyl)-amino-C_{1-3}-alkyl, (heteroaryl-carbonyl)-amino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkyl)-*N*-(heteroaryl-carbonyl)-amino-C_{1-3}-alkyl, 4-(C_{1-3}-alkyl)-piperazin-1-yl-carbonyl-(C_{1-3}-alkyl), tetrazolyl-C_{1-3}-alkyl or imidazoyl-C_{1-3}-alkyl group,

by a carboxy-C_{2-3}-alkenyl, aminocarbonyl-C_{2-3}-alkenyl or C_{1-4}-alkoxy-carbonyl-C_{2-3}-alkenyl group or

by a 5- to 7-membered cycloalkyleneimino group wherein one or two methylene groups adjacent to the nitrogen atom may be replaced by a carbonyl group or a $-CH_2-CH_2-$ group linked to the imino group may be replaced by the group –O-CO-, while the carbonyl group of the –O-CO- group is linked to the imino group,

while the substituents may be identical or different,

and the unsubstituted, mono- or disubstituted phenyl groups contained in the above definitions may additionally be substituted by a fluorine, chlorine, bromine or iodine atom or by a C_{1-3}-alkyl, C_{1-3}-alkoxy, benzyloxy, carboxy, cyano, trifluoromethyl, nitro, amino, hydroxy, C_{1-3}-alkylsulphonylamino, C_{1-3}-alkylamino or di-(C_{1-3}-alkyl)-amino group or by two methyl groups,

the above mentioned alkyl groups including straight-chain and branched alkyl groups, wherein additionally one to 3 hydrogen atoms may be replaced by fluorine atoms,

while, unless otherwise stated, the expression a heteroaryl group refers to a monocyclic 5- or 6-membered heteroaryl group optionally substituted in the carbon skeleton by a C_{1-3}-alkyl group, wherein

the 6-membered heteroaryl group contains one, two or three nitrogen atoms and

the 5-membered heteroaryl group contains an imino group optionally substituted by a C_{1-3}-alkyl or phenyl-C_{1-3}-alkyl group, an oxygen or sulphur atom or

an imino group optionally substituted by a C_{1-3}-alkyl or phenyl-C_{1-3}-alkyl group or an oxygen or sulphur atom and additionally a nitrogen atom or

an imino group optionally substituted by a C_{1-3}-alkyl or phenyl-C_{1-3}-alkyl group and two nitrogen atoms,

and moreover a phenyl ring may be fused to the above mentioned monocyclic heterocyclic groups via two adjacent carbon atoms and the bonding takes place via a nitrogen atom or via a carbon atom of the heterocyclic moiety or a fused-on phenyl ring,

and additionally any carboxy, amino or imino group present may be substituted by a group which can be cleaved *in vivo*,

the tautomers, enantiomers, diastereomers, mixtures thereof and the salts thereof.

6. Compounds of general formula I according to claim 1, wherein

X denotes an oxygen or sulphur atom,

R^1 denotes a hydrogen atom, a C_{1-4}-alkoxy-carbonyl, C_{1-3}-alkyl-carbonyl, aminomethyl, C_{1-3}-alkylaminomethyl, di-(C_{1-3}-alkyl)-aminomethyl or a 5- to 7-membered cycloalkyleneiminomethyl group,

R^2 denotes a fluorine, chlorine or bromine atom or a cyano group,

R^3 denotes a phenyl or naphthyl group or

a phenyl or naphthyl group mono- or disubstituted by a fluorine, chlorine, bromine or iodine atom, by a trifluoromethyl, C_{1-3}-alkyl or C_{1-3}-alkoxy group, while in the case of disubstitution the substituents may be identical or different and the above mentioned unsubstituted as well as the mono- and disubstituted phenyl and naphthyl groups may additionally be substituted

by a C_{1-3}-alkyl-carbonyl-amino, C_{1-4}-alkyloxy-carbonylamino, benzyloxy or hydroxy group,

by a hydroxy-C_{1-3}-alkyl, carboxy-C_{1-3}-alkyl, C_{1-4}-alkoxy-C_{1-3}-alkyl, cyano-C_{1-3}-alkyl, benzylamino-C_{1-3}-alkyl, dibenzylamino-C_{1-3}-alkyl, *N*-benzyl-*N*-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl, C_{1-4}-alkoxy-C_{1-3}-alkyl-carbonylamino-C_{1-3}-alkyl, C_{3-7}-cycloalkyl-carbonylamino-C_{1-3}-alkyl, C_{3-7}-cycloalkyl-C_{1-3}-alkyl-carbonylamino-C_{1-3}-alkyl, benzylcarbonylamino-C_{1-3}-alkyl, phenylcarbonylamino-C_{1-3}-alkyl, heteroaryl-carbonylamino-C_{1-3}-alkyl, phenylamino-C_{1-3}-alkyl, diphenylamino-C_{1-3}-alkyl, *N*-phenyl-*N*-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl, heteroarylamino-C_{1-3}-alkyl, *N*-heteroaryl-*N*-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl, C_{1-4}-alkyl-sulphonylamino-C_{1-3}-alkyl, phenyl-sulphonylamino-C_{1-3}-alkyl, benzyl-sulphonylamino-C_{1-3}-alkyl, C_{1-4}-alkoxy-carbonyl-C_{1-3}-alkyl, *N*-(C_{1-4}-alkoxy-carbonyl)-amino-C_{1-3}-alkyl, aminocarbonyl-C_{1-3}-alkyl, (C_{1-3}-alkylamino)-carbonyl-C_{1-3}-alkyl, di-(C_{1-3}-alkyl)-aminocarbonyl-C_{1-3}-alkyl, 4-(C_{1-3}-alkyl)-piperazin-1-yl-carbonyl-(C_{1-3}-alkyl) or tetrazolyl-C_{1-3}-alkyl group,

by an aminocarbonyl-C_{2-3}-alkenyl or C_{1-4}-alkoxy-carbonyl-C_{2-3}-alkenyl group or

by a 5- to 7-membered cycloalkyleneimino groups, wherein one or two methylene groups adjacent to the nitrogen atom may be replaced by a carbonyl group or a $-CH_2-CH_2-$ group linked to the imino group may be replaced by the group –O-CO-, while the carbonyl group of the –O-CO- group is linked to the imino group,

while the substituents may be identical or different,

R^4 denotes a benzopyrazolyl or 1-(C_{1-3}-alkyl)-piperidin-4-yl group,

a cyclohexyl group which is substituted by a *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl-carbonyl]-amino or *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl-carbonyl]-*N*-(C_{1-3}-alkyl)-amino group, or

a phenyl, pyridinyl or naphthyl group or a pyrrolyl group optionally substituted at the nitrogen by a C_{1-3}-alkyl group, each of which may be substituted

by a fluorine, chlorine, bromine or iodine atom, by a C_{1-3}-alkyl, C_{1-3}-alkoxy, cyano, nitro, carboxy or trifluoromethyl group,

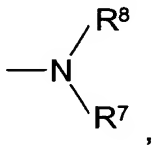
by a ω-[di-(C_{1-3}-alkyl)-amino]-C_{2-3}-alkoxy, C_{1-3}-alkyl-sulphonyl, di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl-sulphonyl, 4-(C_{1-3}-alkyl)-piperazino, imidazolyl, C_{1-3}-alkylimidazolyl or [di-(C_{1-3}-alkyl)-amino]-C_{1-3}-alkyl-imidazolyl group,

by a C_{1-3}-alkyl group which is terminally substituted by a carboxy, C_{1-3}-alkoxy-carbonyl, amino, C_{1-3}-alkylamino, di-(C_{1-3}-alkyl)-amino, *N*-(C_{1-3}-alkyl)-*N*-(ω-amino-C_{2-3}-alkyl)-amino, *N*-benzyl-*N*-(C_{1-3}-alkyl)-amino, *N*-[ω-(di-(C_{1-3}-alkyl)-amino)-C_{2-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino-carbonyl, *N*-(ω-hydroxy-C_{2-3}-alkyl)-*N*-(C_{1-3}-alkyl)-amino, di-(ω-hydroxy-C_{2-3}-alkyl)-amino, *N*-(ω-C_{1-3}-alkoxy-C_{2-3}-alkoxy-C_{1-3}-alkyl)-*N*-(C_{1-3}-alkyl)-amino, *N*-(C_{1-4}-alkoxy-carbonyl)-amino, *N*-(C_{1-4}-alkoxy-carbonyl)-*N*-(C_{1-3}-alkyl)-amino, *N*-{ω-[*N*-(C_{1-4}-alkoxy-carbonyl)-amino]-(C_{1-3}-alkyl)}-*N*-(C_{1-3}-alkyl)-amino, pyridinyl, triazolyl, pyrrolidino, piperidino, di-(C_{1-3}-alkyl)-piperidine, [di-(C_{1-3}-alkyl)-amino]-piperidino, piperazino, morpholino, (C_{1-3}-alkyl)-piperazino, 4-(C_{1-3}-alkyl)-piperazino-carbonyl or 4-(C_{1-4}-alkoxy-carbonyl)-piperazino group,

by a carbonyl group which is substituted by a C_{1-3}-alkoxy, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-amino, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-

(C_{1-3}-alkyl)-amino, *N*-(C_{3-7}-cycloalkyl)-*N*-(C_{1-3}-alkyl)-amino, piperidino, piperazino, 4-(C_{1-4}-alkyloxy-carbonyl)-piperazino or (C_{1-3}-alkyl)-piperazino group, or

by a group of formula



wherein

R^7 denotes a hydrogen atom, a C_{1-3}-alkyl, C_{1-3}-alkyl-carbonyl, benzylcarbonyl, pyridinylcarbonyl, furanylcarbonyl, pyrrolidino-C_{1-3}-alkyl-carbonyl, C_{1-3}-alkoxy-C_{1-3}-alkyl-carbonyl, di-(C_{1-3}-alkyl)-amino-carbonyl-C_{1-3}-alkyl, C_{1-4}-alkylsulphonyl or benzylsulphonyl group or a phenylcarbonyl group optionally substituted in the phenyl moiety by one or two methoxy groups and

R^8 denotes a C_{1-3}-alkyl, ω-[di-(C_{1-3}-alkyl)-amino]-C_{2-3}-alkyl, di-(C_{1-3}-alkyl)-amino-carbonyl-C_{1-3}-alkyl, di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl-amino-carbonyl or ω-[*N*-benzyl-*N*-(C_{1-3}-alkyl)-amino]-C_{2-3}-alkyl group or

a 4-(C_{1-3}-alkyl)-piperazin-1-yl-carbonyl, 4-(C_{1-3}-alkyl)-piperazin-1-yl-aminocarbonyl, 1-(C_{1-3}-alkyl)-piperidin-4-yl-aminocarbonyl, 1-(C_{1-3}-alkyl)-piperidin-4-yl-oxy-carbonyl or (pyridinyl-C_{1-3}-alkyl)-aminocarbonyl group or

a C_{1-3}-alkyl-carbonyl group terminally substituted by a hydroxy, amino, di-(C_{1-3}-alkyl)-amino, di-(ω-hydroxy-C_{2-3}-alkyl)-amino, C_{1-3}-alkyl-carbonyl-amino, *N*-benzyl-*N*-(C_{1-3}-alkyl)-amino, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino, imidazolyl, piperazino, 4-(C_{1-3}-alkyl)-piperazin-1-yl, 4-benzyl-piperazin-1-yl, 4-(C_{1-4}-alkoxy-carbonyl)-piperazin-1-yl, 4-(C_{1-3}-alkyl)-

homopiperazin-1-yl, morpholino, pyrrolidino, piperidino-,1-(C_{1-3}-alkyl)-piperidin-4-yl, 4-(C_{1-3}-alkyl)-piperidin-1-yl or phthalimido group,

R^5 denotes a hydrogen atom or a C_{1-3}-alkyl group and

R^6 denotes a hydrogen atom or a nitro group,

while the unsubstituted, mono- or disubstituted phenyl groups contained in the above definitions may additionally be substituted by a cyano or a methoxy group or by two methyl groups, and

the above mentioned alkyl groups include straight-chain and branched alkyl groups, wherein additionally one to 3 hydrogen atoms may be replaced by fluorine atoms,

while, unless otherwise stated, the expression a heteroaryl group refers to a monocyclic 5- or 6-membered heteroaryl group optionally substituted in the carbon skeleton by a C_{1-3}-alkyl group, wherein

the 6-membered heteroaryl group contains one, two or three nitrogen atoms and

the 5-membered heteroaryl group contains an imino group optionally substituted by a C_{1-3}-alkyl or phenyl-C_{1-3}-alkyl group, an oxygen or sulphur atom or

an imino group optionally substituted by a C_{1-3}-alkyl, amino-C_{1-3}-alkyl, C_{1-3}-alkylamino-C_{1-3}-alkyl, di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl or phenyl-C_{1-3}-alkyl group or an oxygen or sulphur atom and additionally a nitrogen atom or

an imino group optionally substituted by a C_{1-3}-alkyl or phenyl-C_{1-3}-alkyl group and two nitrogen atoms,

and moreover a phenyl ring may be fused to the above mentioned monocyclic heterocyclic groups via two adjacent carbon atoms and the bonding takes place via a nitrogen atom or via a carbon atom of the heterocyclic moiety or a fused-on phenyl ring,

and additionally any carboxy, amino or imino group present may be substituted by a group which can be cleaved *in vivo*,

the tautomers, enantiomers, diastereomers, mixtures thereof and the salts thereof.

7. Compounds of general formula I according to claim 1, wherein

X denotes an oxygen atom,

R^1 denotes a hydrogen atom,

R^2 denotes a fluorine, chlorine or bromine atom or a cyano group,

R^3 denotes a phenyl group or a phenyl group monosubstituted by a fluorine, chlorine, bromine or iodine atom or by a C_{1-3}-alkoxy group, while the above mentioned unsubstituted and monosubstituted phenyl groups may additionally be substituted in the 3 or 4-position

by a fluorine, chlorine or bromine atom,

by a C_{1-3}-alkoxy or C_{1-2}-alkyl-carbonyl-amino group,

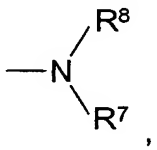
by a carboxy-C_{1-3}-alkyl, C_{1-4}-alkoxy-carbonyl-C_{1-3}-alkyl, aminocarbonyl-C_{1-3}-alkyl, (C_{1-2}-alkylamino)-carbonyl-C_{1-3}-alkyl, di-(C_{1-2}-alkyl)-amino-carbonyl-C_{1-3}-alkyl, (C_{1-2}-alkyl-carbonyl)-amino-C_{1-3}-alkyl or (phenyl-carbonyl)-amino-C_{1-3}-alkyl group,

while the substituents may be identical or different,

R^4 denotes a phenyl group which is substituted

by a C_{1-3}-alkyl group terminally substituted by a di-(C_{1-2}-alkyl)-amino group or

by a group of formula



wherein

R^7 denotes a C_{1-2}-alkyl, C_{1-2}-alkyl-carbonyl, di-(C_{1-2}-alkyl)-amino-carbonyl-C_{1-3}-alkyl or C_{1-3}-alkylsulphonyl group and

R^8 denotes a C_{1-3}-alkyl or ω-[di-(C_{1-2}-alkyl)-amino]-C_{2-3}-alkyl group or

a C_{1-3}-alkyl-carbonyl group terminally substituted by a di-(C_{1-2}-alkyl)-amino, piperazino or 4-(C_{1-3}-alkyl)-piperazin-1-yl group,

R^5 denotes a hydrogen atom and

R^6 denotes a hydrogen atom,

while the above mentioned alkyl groups include straight-chain and branched alkyl groups, wherein additionally one to 3 hydrogen atoms may be replaced by fluorine atoms,

while additionally any carboxy, amino or imino group present may be substituted by a group which can be cleaved *in vivo*,

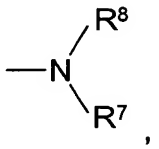
the tautomers, enantiomers, diastereomers, mixtures thereof and the salts thereof.

8. Compounds of general formula I according to claim 1, wherein

X, R^1, R^2, R^3, R^5 and R^6 are defined as in claim 7 and

R^4 denotes a phenyl group which is substituted

by a group of formula



wherein

R^7 denotes a C_{1-2}-alkyl, C_{1-2}-alkyl-carbonyl, di-(C_{1-2}-alkyl)-amino-carbonyl-C_{1-3}-alkyl or C_{1-3}-alkylsulphonyl group and

R^8 denotes a C_{1-3}-alkyl or ω-[di-(C_{1-2}-alkyl)-amino]-C_{2-3}-alkyl group or

a C_{1-3}-alkyl-carbonyl group terminally substituted by a di-(C_{1-2}-alkyl)-amino, piperazino or 4-(C_{1-3}-alkyl)-piperazin-1-yl group,

the above mentioned alkyl groups including straight-chain and branched alkyl groups, wherein additionally one to 3 hydrogen atoms may be replaced by fluorine atoms,

while additionally any carboxy, amino or imino group present may be substituted by a group which can be cleaved in vivo,

the tautomers, enantiomers, diastereomers, mixtures thereof and the salts thereof.

9. Compounds of general formula I according to claim 1, wherein

X, R^1, R^2, R^4, R^5 and R^6 are defined as in claim 7 and

R^3 denotes a phenyl group or a phenyl group monosubstituted by a fluorine, chlorine or bromine atom or by a C_{1-3}-alkoxy group, while the above mentioned unsubstituted and monosubstituted phenyl groups are additionally substituted in the 3- or 4-position

by a fluorine, chlorine or bromine atom,

by a C_{1-3}-alkoxy or C_{1-2}-alkyl-carbonyl-amino group or

by a carboxy-C_{1-3}-alkyl, C_{1-4}-alkoxy-carbonyl-C_{1-3}-alkyl, aminocarbonyl-C_{1-3}-alkyl, (C_{1-2}-alkylamino)-carbonyl-C_{1-3}-alkyl, di-(C_{1-2}-alkyl)-amino-carbonyl-C_{1-3}-alkyl, (C_{1-2}-alkyl-carbonyl)-amino-C_{1-3}-alkyl or (phenyl-carbonyl)-amino-C_{1-3}-alkyl group,

while the substituents may be identical or different,

the above mentioned alkyl groups including straight-chain and branched alkyl groups, wherein additionally one to 3 hydrogen atoms may be replaced by fluorine atoms,

while additionally any carboxy, amino or imino group present may be substituted by a group which can be cleaved in vivo,

the tautomers, enantiomers, diastereomers, mixtures thereof and the salts thereof.

10. Compounds of general formula I according to claim 1, wherein

X denotes an oxygen atom,

R^1 denotes a hydrogen atom,

R^2 denotes a bromine atom,

R^3 denotes a phenyl group,

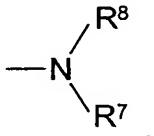
R^4 denotes a 1-(C_{1-3}-alkyl)-piperidin-4-yl group

or a phenyl group which is substituted in the 4-position

by a C_{1-3}-alkyl group terminally substituted by a C_{1-3}-alkylamino, di-(C_{1-3}-alkyl)-amino, *N*-[ω-(di-(C_{1-3}-alkyl)-amino)-C_{2-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino or *N*-(C_{1-4}-alkyloxy-carbonyl)-*N*-(C_{1-3}-alkyl)-amino group,

by a 1-(C_{1-3}-alkyl)-imidazol-2-yl or 4-(C_{1-3}-alkyl)-piperazin-1-yl-carbonyl group or

by a group of formula



,

wherein

R^7 denotes a C_{1-3}-alkyl, C_{1-3}-alkyl-carbonyl, C_{1-3}-alkyl-sulphonyl or benzylsulphonyl group and

R^8 denotes a ω-[di-(C_{1-3}-alkyl)-amino]-C_{2-3}-alkyl, ω-[di-(C_{1-3}-alkyl)-amino]-C_{1-4}-alkyl-carbonyl, ω-[4-(C_{1-3}-alkyl)-piperazin-1-yl]-C_{1-3}-alkyl-carbonyl or ω-{*N*-[di-(C_{1-3}-alkyl)-amino-C_{2-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino}-C_{1-3}-alkyl-carbonyl group,

R^5 denotes a hydrogen atom and

R^6 denotes a hydrogen atom,

the above mentioned alkyl groups including straight-chain and branched alkyl groups, wherein additionally one to 3 hydrogen atoms may be replaced by fluorine atoms,

the tautomers, enantiomers, diastereomers, mixtures thereof and the salts thereof.

11. Compounds of general formula I according to claim 1, wherein

X denotes an oxygen atom,

R^1 denotes a hydrogen atom,

R^2 denotes a fluorine atom,

R^3 denotes a phenyl group which is optionally substituted in the 3- or 4-position by a fluorine or iodine atom or by a cyano-C_{1-3}-alkyl, amino-C_{1-3}-alkyl, C_{1-3}-alkylamino-C_{1-3}-alkyl, C_{1-5}-alkyl-carbonylamino-C_{1-3}-alkyl, C_{1-4}-alkyloxy-carbonyl-amino-C_{1-3}-alkyl, C_{1-4}-alkyloxy-C_{1-3}-alkyl-carbonyl-amino-C_{1-3}-alkyl, C_{3-7}-cycloalkyl-carbonyl-amino-C_{1-3}-alkyl, C_{3-7}-cycloalkyl-C_{1-3}-alkyl-carbonyl-amino-C_{1-3}-alkyl, *N*-(phenyl-carbonyl)-amino-C_{1-3}-alkyl, *N*-(benzyl-carbonyl)-amino-C_{1-3}-alkyl, heteroaryl-carbonyl-amino-C_{1-3}-alkyl, *N*-(C_{1-3}-alkylsulphonyl)-amino-C_{1-3}-alkyl, *N*-(phenylsulphonyl)-amino-C_{1-3}-alkyl, *N*-(benzylsulphonyl)-amino-C_{1-3}-alkyl, carboxy-C_{1-3}-alkyl, C_{1-4}-alkoxy-carbonyl-C_{1-3}-alkyl, aminocarbonyl-C_{1-3}-alkyl, C_{1-3}-alkylaminocarbonyl-C_{1-3}-alkyl, di-(C_{1-3}-alkyl)-aminocarbonyl-C_{1-3}-alkyl, 4-(C_{1-3}-alkyl)-piperazin-1-yl-carbonyl-C_{1-3}-alkyl, 2-(aminocarbonyl)-C_{2-3}-alkenyl or 2-(C_{1-3}-alkyloxy-carbonyl)-C_{2-3}-alkenyl group,

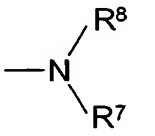
or a phenyl group trisubstituted in the 3-, 4- and 5-position by fluorine atoms,

R^4 denotes a phenyl group which may be substituted in the 4-position

by a C_{1-3}-alkyl group terminally substituted by a pyrrolidin-1-yl, piperidin-1-yl, 4-(C_{1-3}-alkyl)-piperazin-1-yl, C_{1-3}-alkylamino, di-(C_{1-3}-alkyl)-amino, *N*-[di-(C_{1-3}-alkyl)-amino-C_{2-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino or *N*-(C_{1-4}-alkyloxy-carbonyl)-*N*-(C_{1-3}-alkyl)-amino group,

by a C_{1-3}-alkyl-sulphonyl, 1-(C_{1-3}-alkyl)-imidazol-2-yl or 4-(C_{1-3}-alkyl)-piperazin-1-yl-carbonyl group or

by a group of formula



,

wherein

R^7 denotes a C_{1-3}-alkyl, C_{1-3}-alkyl-carbonyl, C_{1-3}-alkyl-sulphonyl or benzylsulphonyl group and

R^8 denotes a C_{1-3}-alkyl, ω-[di-(C_{1-3}-alkyl)-amino]-C_{2-3}-alkyl, ω-[di-(C_{1-3}-alkyl)-amino]-C_{1-3}-alkyl-carbonyl, di-(C_{1-3}-alkyl)-amino-carbonyl-C_{1-3}-alkyl, ω-[4-(C_{1-3}-alkyl)-piperazin-1-yl]-C_{1-3}-alkyl-carbonyl or ω-{*N*-[di-(C_{1-3}-alkyl)-amino-C_{2-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino}-C_{1-3}-alkyl-carbonyl group,

R^5 denotes a hydrogen atom and

R^6 denotes a hydrogen atom,

while the term heteroaryl group denotes a pyridinyl, furyl or thienyl group,

and unsubstituted or monosubstituted phenyl groups contained in the above mentioned definitions may additionally be substituted by a methoxy group and

the above mentioned alkyl groups include straight-chain and branched alkyl groups, wherein additionally one to 3 hydrogen atoms may be replaced by fluorine atoms,

while additionally any carboxy, amino or imino group present may be substituted by a group which can be cleaved in vivo,

the tautomers, enantiomers, diastereomers, mixtures thereof and the salts thereof.

12. Compounds of general formula I according to claim 1, wherein

X denotes an oxygen atom,

R^1 denotes a hydrogen atom,

R^2 denotes a cyano group,

R^3 denotes a phenyl group optionally substituted by one or two methoxy groups,

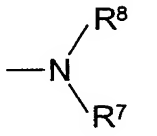
R^4 denotes a phenyl group which is substituted in the 3- or 4-position

by a bromine atom,

by a C_{1-3}-alkyl group terminally substituted by a pyrrolidin-1-yl, piperidin-1-yl, 4-(C_{1-3}-alkyl)-piperazin-1-yl-carbonyl, C_{1-3}-alkylamino, di-(C_{1-3}-alkyl)-amino, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-(C_{1-3}-alkyl)-aminocarbonyl or *N*-(C_{1-4}-alkyloxy-carbonyl)-*N*-(C_{1-3}-alkyl)-amino group,

by a ω-di-(C_{1-3}-alkyl)-amino-C_{2-3}-alkoxy, *N*-(di-(C_{1-3}-alkyl)-amino-C_{2-3}-alkyl)-amino-carbonyl, *N*-[di-(C_{1-3}-alkyl)-amino-C_{2-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino-carbonyl or 4-(C_{1-3}-alkyl)-piperazin-1-yl-carbonyl group or

by a group of formula



wherein

R^7 denotes a hydrogen atom or a C_{1-3}-alkyl, C_{1-3}-alkyl-carbonyl or C_{1-3}-alkylsulphonyl group and

R^8 denotes a ω-[di-(C_{1-3}-alkyl)-amino]-(C_{2-3}-alkyl), ω-[di-(C_{1-3}-alkyl)-amino]-C_{1-3}-alkyl-carbonyl, ω-(piperazin-1-yl)-C_{1-3}-alkyl-carbonyl, ω-[4-(C_{1-3}-alkyl)-piperazin-1-yl]-C_{1-3}-alkyl-carbonyl, ω-[4-(C_{1-4}-alkyloxy-carbonyl)-piperazin-1-yl]-C_{1-3}-alkyl-carbonyl, ω-[4-(C_{1-3}-alkyl)-homopiperazin-1-yl]-C_{1-3}-alkyl-carbonyl, ω-morpholino-C_{1-3}-alkyl-carbonyl or ω-{*N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino}-C_{1-3}-alkyl-carbonyl group,,

R^5 denotes a hydrogen atom and

R^6 denotes a hydrogen atom,

the above mentioned alkyl groups including straight-chain and branched alkyl groups, wherein additionally one to 3 hydrogen atoms may be replaced by fluorine atoms,

while additionally any carboxy, amino or imino group present may be substituted by a group which can be cleaved *in vivo*,

their stereoisomers and their salts.

13. Compounds of general formula I according to claim 1, wherein

X denotes an oxygen or sulphur atom,

R^1 denotes a hydrogen atom,

R^2 denotes a chlorine atom,

R^3 denotes a phenyl group which is optionally monosubstituted in the 3- or 4-position

by a chlorine or iodine atom,

by a cyano, hydroxy, benzyloxy, amino or nitro group

or by an aminomethyl, acetylamino, phenylcarbonylamino-C_{1-3}-alkyl, C_{1-3}-alkylsulphonylamino-C_{1-3}-alkyl, phenylsulphonylamino-C_{1-3}-alkyl, acetylaminomethyl, imidazol-1-yl-methyl, 2-oxo-pyrrolidin-1-yl, 2-carboxy-ethyl, 2-methoxycarbonyl-ethyl, 2-aminocarbonyl-ethyl, 2-(methylaminocarbonyl)-ethyl or 2-methoxycarbonyl-ethenyl group,

or a 3-hydroxy-4-nitro-phenyl, 4-amino-3-nitrophenyl or 3,4-dimethoxyphenyl group,

R^4 denotes a 5-(4-methyl-piperazin-1-yl-carbonyl)-pyridin-2-yl, 2-[*N*-acetyl-*N*-(ω-dimethylamino-C_{2-3}-alkyl)-amino]-pyridin-5-yl, benzo-pyrazol-6-yl, 1-methyl-2-(4-methyl-piperazin-1-yl-carbonyl)-pyrrol-4-yl, 2-(*N*-dimethylamino-ethyl-*N*-methyl-aminocarbonyl)-pyrrol-4-yl, 1-methyl-2-(*N*-dimethylamino-ethyl-*N*-methyl-aminocarbonyl)-pyrrol-4-yl, 4-(N-dimethylamino-methylcarbonylamino)-cyclohexyl or 4-[(*N*-dimethylamino-methylcarbonyl)-*N*-methyl-amino]cyclohexyl group or

a phenyl group which is substituted in the 3-position by a carboxy, carboxy-C_{1-3}-alkyl, C_{1-4}-alkoxy-carbonyl, C_{1-4}-alkoxy-carbonyl-C_{1-3}-alkyl, dimethylamino-C_{1-3}-alkyl or pyridin-4-yl-C_{1-3}-alkyl group or is substituted in the 4-position

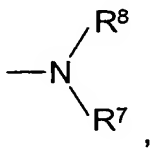
by a carboxy, ω-[di-(C_{1-3}-alkyl)-amino]-C_{2-3}-alkoxy, ethoxycarbonyl, piperidin-1-yl-carbonyl, 4-(C_{1-4}-alkyloxy-carbonyl)-piperazin-1-yl-carbonyl, *N*-(C_{3-7}-cycloalkyl)-*N*-(C_{1-3}-alkyl)-amino-carbonyl or *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-(C_{1-3}-alkyl)-aminocarbonyl group,

by a [di-(C_{1-3}-alkyl)-amino]-C_{1-3}-alkylsulphonyl group,

by a C_{1-3}-alkyl group terminally substituted by a carboxy, C_{1-4}-alkyloxy-carbonyl, amino, C_{1-3}-alkylamino, di-(C_{1-3}-alkyl)-amino, *N*-benzyl-*N*-(C_{1-3}-alkyl)-amino, *N*-(2-hydroxyethyl)-*N*-(C_{1-3}-alkyl)-amino, Di-(2-hydroxy-ethyl)-amino, triazolyl, *N*-(methoxyethoxyethyl)-*N*-(C_{1-3}-alkyl)-amino, *N*-(amino-C_{1-3}-alkyl)-*N*-(C_{1-3}-alkyl)-amino, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino-carbonyl, *N*-(C_{1-4}-alkyloxy-carbonyl-amino-C_{1-3}-alkyl)-*N*-(C_{1-3}-alkyl)-amino, *N*-(C_{1-4}-alkyloxy-carbonyl)-amino or *N*-(C_{1-4}-alkyloxy-carbonyl)-*N*-(C_{1-3}-alkyl)-amino group,

by a 1-methyl-imidazol-2-yl, 5-methyl-1H-imidazol-4-yl, 1-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-imidazol-2-yl, 4-methyl-piperazin-1-yl, piperazinylcarbonyl or 4-methyl-piperazin-1-yl-carbonyl group or

by a group of formula



,

wherein

R^7 denotes a hydrogen atom or a C_{1-3}-alkyl, C_{1-3}-alkyl-carbonyl, di-(C_{1-3}-alkyl)-amino-carbonyl-C_{1-3}-alkyl, benzylcarbonyl, pyridinylcarbonyl, furanylcarbonyl, methoxymethylcarbonyl, C_{1-4}-alkylsulphonyl or benzylsulphonyl group or a phenylcarbonyl group optionally substituted in the phenyl moiety by one or two methoxy groups and

R^8 denotes a C_{1-3}-alkyl, ω-[di-(C_{1-3}-alkyl)-amino]-C_{2-3}-alkyl, ω-[*N*-benzyl-*N*-(C_{1-3}-alkyl)-amino]-C_{2-3}-alkyl, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-amino-carbonyl, (pyridinyl-C_{1-3}-alkyl)-amino-carbonyl, 1-(C_{1-3}-alkyl)-piperidin-4-yl-amino-carbonyl-,1-(C_{1-3}-alkyl)-piperidin-4-yl-oxy-carbonyl, 4-(C_{1-3}-alkyl)-piperazin-1-yl-amino-carbonyl, 4-(C_{1-3}-alkyl)-piperazin-1-yl-carbonyl or di-(C_{1-3}-alkyl)-aminocarbonyl-C_{1-3}-alkyl group or

a C_{1-4}-alkyl-carbonyl group terminally substituted by a hydroxy, amino, di-(C_{1-3}-alkyl)-amino, *N*-benzyl-*N*-(C_{1-3}-alkyl)-amino, di-(2-hydroxyethyl)-amino, acetylamino, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-(C_{1-3}-alkyl)-amino, imidazol-1-yl, piperazin-1-yl, 4-(C_{1-3}-alkyl)-piperazin-1-yl, 4-benzyl-piperazin-1-yl, 4-(C_{1-4}-alkyloxy-carbonyl)-piperazin-1-yl, 4-(C_{1-3}-alkyl)-homopiperazin-1-yl, morpholin-4-yl, pyrrolidin-1-yl, piperidin-1-yl, 1-(C_{1-3}-alkyl)-piperidin-4-yl or phthalimido group,

R^5 denotes a hydrogen atom and

R^6 denotes a hydrogen atom or a nitro group,

while the unsubstituted or monosubstituted phenyl groups mentioned in the above definitions may additionally be substituted by a methoxy or a cyano group or by two methyl groups,

the above mentioned alkyl groups including straight-chain and branched alkyl groups, wherein additionally one to 3 hydrogen atoms may be replaced by fluorine atoms,

while additionally any carboxy, amino or imino group present may be substituted by a group which can be cleaved in vivo,

the tautomers, enantiomers, diastereomers, mixtures thereof and the salts thereof.

14. The following compounds of general formula I:

(a) 3-Z-[1-(4-(N-(2-dimethylamino-ethyl)-N-methylsulphonyl-amino)-anilino)-1-phenyl-methylene]-6-chloro-2-indolinone,

(b) 3-Z-[1-(4-(N-(4-methyl-piperazin-1-yl-methylcarbonyl)-N-methyl-amino)-anilino)-1-phenyl-methylene]-6-chloro-2-indolinone,

(c) 3-Z-[1-(4-(N-(3-dimethylamino-propyl)-N-acetyl-amino)-anilino)-1-phenyl-methylene]-6-chloro-2-indolinone,

(d) 3-Z-[1-(4-(N-(4-ethyl-piperazin-1-yl-methylcarbonyl)-N-methyl-amino)-anilino)-1-phenyl-methylene]-6-chloro-2-indolinone,

(e) 3-Z-[1-(4-(N-(2-dimethylamino-ethyl)-N-acetyl-amino)-anilino)-1-(3,4-dimethoxy-phenyl)-methylene]-6-chloro-2-indolinone,

(f) 3-Z-[1-(4-(N-(4-methyl-piperazin-1-yl-methylcarbonyl)-N-methyl-amino)-anilino)-1-(3,4-dimethoxy-phenyl)-methylene]-6-chloro-2-indolinone,

(g) 3-Z-[1-(4-(N-(3-dimethylamino-propyl)-N-acetyl-amino)-anilino)-1-phenyl-methylene]-6-bromo-2-indolinone,

(h) 3-Z-[1-(4-(N-(4-methyl-piperazin-1-yl-methylcarbonyl)-N-methyl-amino)-anilino)-1-phenyl-methylene]-6-bromo-2-indolinone,

(i) 3-Z-[1-(4-(N-(3-dimethylamino-propyl)-N-acetyl-amino)-anilino)-1-phenyl-methylene]-6-cyano-2-indolinone,

(j) 3-Z-[1-(4-(N-(4-methyl-piperazin-1-yl-methylcarbonyl)-N-methyl-amino)-anilino)-1-phenyl-methylene]-6-cyano-2-indolinone,

(k) 3-Z-[1-(4-(N-(4-ethyl-piperazin-1-yl-methylcarbonyl)-N-methyl-amino)-anilino)-1-phenyl-methylene]-6-cyano-2-indolinone,

(l) 3-Z-[1-(4-(*N*-(dimethylamino-methylcarbonyl)-*N*-methyl-amino)-anilino)-1-phenyl-methylene]-6-fluoro-2-indolinone,

(m) 3-Z-[1-(4-(N-(2-dimethylamino-ethyl)-N-acetyl-amino)-anilino)-1-phenyl-methylene]-6-fluoro-2-indolinone,

(n) 3-Z-[1-(4-(N-(4-methyl-piperazin-1-yl-methylcarbonyl)-N-methyl-amino)-anilino)-1-phenyl-methylene]-6-fluoro-2-indolinone,

(o) 3-Z-[1-(4-(dimethylaminomethyl)-anilino)-1-(3-fluoro-phenyl)-methylene]-6-fluoro-2-indolinone,

(p) 3-Z-[1-(4-(N-(3-dimethylamino-propyl)-N-acetyl-amino)-anilino)-1-(3-fluoro-phenyl)-methylene]-6-fluoro-2-indolinone,

(q) 3-Z-[1-(4-(N-(4-methyl-piperazin-1-yl-methylcarbonyl)-N-methyl-amino)-anilino)-1-(3-fluoro-phenyl)-methylene]-6-fluoro-2-indolinone,

(r) 3-Z-[1-(4-dimethylaminomethyl-anilino)-1-(4-(2-carbamoyl-ethyl)-phenyl)-methylene]-6-fluoro-2-indolinone,

(s) 3-Z-[1-(4-(N-(piperazin-1-yl-methylcarbonyl)-N-methyl-amino)-anilino)-1-phenyl-methylene]-6-chloro-2-indolinone,

(t) 3-Z-[1-(4-dimethylaminomethyl-anilino)-1-(3-(2-carboxy-ethyl)-phenyl)-methylene]-6-chloro-2-indolinone,

(u) 3-Z-[1-(4-dimethylaminomethyl-anilino)-1-(4-(2-carboxy-ethyl)-phenyl)-methylene]-6-fluoro-2-indolinone,

(v) 3-Z-[1-(4-dimethylaminomethyl-anilino)-1-(3-(2-carboxy-ethyl)-phenyl)-methylene]-6-fluoro-2-indolinone,

(w) 3-Z-[1-(4-(N-(4-methyl-piperazin-1-yl-methylcarbonyl)-N-methyl-amino)-anilino)-1-(4-carboxymethyl-phenyl)-methylene]-6-fluoro-2-indolinone,

(x) 3-Z-[1-(4-dimethylaminomethyl-anilino)-1-(4-(2-methylcarbamoyl-ethyl)-phenyl)-methylene]-6-fluoro-2-indolinone,

(y) 3-Z-[1-(4-dimethylaminomethyl-anilino)-1-(3-(2-carbamoyl-ethyl)-phenyl)-methylene]-6-fluoro-2-indolinone,

(z) 3-Z-[1-(4-dimethylaminomethyl-anilino)-1-(3-(2-dimethylcarbamoyl-ethyl)-phenyl)-methylene]-6-fluoro-2-indolinone,

(aa) 3-Z-[1-(4-(N-(2-dimethylamino-ethyl)-N-methylsulphonyl-amino)-anilino)-1-(4-dimethylcarbamoylmethyl-phenyl)-methylene]-6-fluoro-2-indolinone,

(ab) 3-Z-[1-(4-(N-methyl-N-acetyl-amino)-anilino)-1-(4-(2-methylcarbamoyl-ethyl)-phenyl)-methylene]-6-fluoro-2-indolinone,

(ac) 3-Z-[1-(4-(N-(4-methyl-piperazin-1-yl-methylcarbonyl)-N-methyl-amino)-anilino)-1-(4-acetylamino-phenyl)-methylene]-6-chloro-2-indolinone,

(ad) 3-Z-[1-(4-dimethylaminomethyl-anilino)-1-(4-acetylaminomethyl-phenyl)-methylene]-6-chloro-2-indolinone,

(ae) 3-Z-[1-(4-dimethylaminomethyl-anilino)-1-(3-acetylaminomethyl-phenyl)-methylene]-6-fluoro-2-indolinone,

(af) 3-Z-[1-(4-dimethylaminomethyl-anilino)-1-(3-benzoylaminomethyl-phenyl)-methylene]-6-fluoro-2-indolinone

(ag) 3-Z-[1-(4-dimethylaminomethyl-anilino)-1-(3-(2-acetylamino-ethyl)-phenyl)-methylene]-6-fluoro-2-indolinone

(ah) 3-Z-[1-(4-(N-(2-dimethylamino-ethylcarbonyl)-N-methyl-amino)-anilino)-1-(4-(2-carboxy-ethyl)-phenyl)-methylene]-6-fluoro-2-indolinone,

(ai) 3-Z-[1-(4-(pyrrolidin-1-yl-methyl)-anilino)-1-(4-(2-carboxy-ethyl)-phenyl)-methylene]-6-fluoro-2-indolinone and

(aj) 3-Z-[1-(4-dimethylaminomethyl-anilino)-1-(4-(2-carboxy-ethyl)-phenyl)-methylene]-6-chloro-2-indolinone

(ak) 3-Z-[1-(4-diethylaminomethyl-anilino)-1-(4-(2-carboxy-ethyl)-phenyl)-methylene]-6-fluoro-2-indolinone

(al) 3-Z-[1-(4-(2-dimethylamino-ethyl)-anilino)-1-(4-(2-carboxy-ethyl)-phenyl)-methylene]-6-chloro-2-indolinone

(am) 3-Z-[1-(4-(pyrrolidin-1-yl-methyl)-anilino)-1-(4-(2-carboxy-ethyl)-phenyl)-methylene]-6-chloro-2-indolinone

(an) 3-Z-[1-(4-(pyrrolidin-1-yl-methyl)-anilino)-1-(4-(2-carboxy-ethyl)-phenyl)-methylene]-6-bromo-2-indolinone

(ap) 3-Z-[1-(4-(dimethylaminomethyl)-anilino)-1-(4-(2-carboxy-ethyl)-phenyl)-methylene]-6-bromo-2-indolinone

(ao) 3-Z-[1-(4-(diethylaminomethyl)-anilino)-1-(4-(2-carboxy-ethyl)-methylene]-6-bromo-2-indolinone

while additionally any carboxy, amino or imino group present may be substituted by a group which can be cleaved *in vivo*,

and the salts thereof.

15. Physiologically acceptable salts of the compounds according to claims 1 to 14.

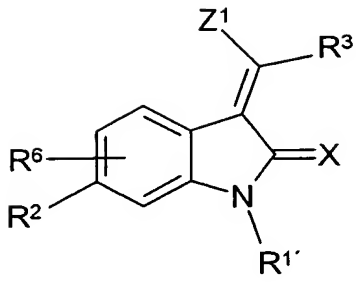
16. Pharmaceutical compositions containing a compound of general formula I according to at least one of claims 1 to 14, or a physiologically acceptable salt according to claim 15 optionally together with one or more inert carriers and/or diluents.

17. Use of a compound of general formula I according to at least one of claims 1 to 14, or a physiologically acceptable salt according to claim 15, for preparing a pharmaceutical composition which is suitable for treating excessive or anomalous cell proliferation.

18. Process for preparing a pharmaceutical composition according to claim 16, characterised in that a compound of general formula I according to at least one of claims 1 to 14, or a physiologically acceptable salt according to claim 15, is incorporated by a non-chemical method in one or more inert carriers and/or diluents.

19. Process for preparing the compounds according to claims 1 to 15, characterised in that

a. a compound of general formula



(V),

wherein

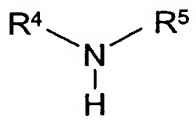
the groups Z^1 and R^3 may optionally change positions,

X, R^2, R^3 and R^6 are defined as in claim 1,

$R^{1'}$ has the meanings given for R^1 hereinbefore or denotes a protective group for the nitrogen atom of the lactam group, while R^1 may also denote a bond to a solid phase, optionally formed via a spacer,

and Z^1 denotes a halogen atom, a hydroxy, alkoxy or aryl-alkoxy group, e.g. a chlorine or bromine atom, a methoxy, ethoxy or benzyloxy group,

is reacted with an amine of general formula



(VI),

wherein

R^4 and R^5 are as hereinbefore defined,

and if necessary any protective group used for the nitrogen atom of the lactam group is subsequently cleaved or any protective group used is subsequently cleaved from a solid phase,

b. in order to prepare a compound of general formula I wherein R^4 contains the group R^8, where

R^8 denotes a C_{1-4}-alkyl-carbonyl group terminally substituted by a hydroxy, C_{1-3}-alkyoxyl group, amino, (C_{1-3}-alkyl)-amino, di-(C_{1-3}-alkyl)-amino, (ω-hydroxy-C_{2-3}-alkyl)-amino, di-(ω-hydroxy-

C_{2-3}-alkyl)-amino, (ω-alkoxy-C_{2-3}-alkyl)-amino, di-(ω-alkoxy-C_{2-3}-alkyl)-amino, C_{1-3}-alkyl-carbonyl-amino, *N*-benzyl-*N*-C_{1-3}-alkyl-amino, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-C_{1-3}-alkyl-amino, 1-(C_{1-3}-alkyl)-piperidin-4-yl- group or by a 5- to 7-membered cycloalkyleneimino group,

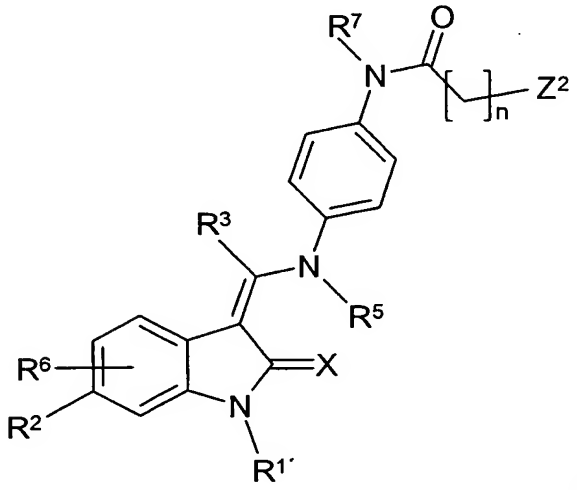
while the cycloalkylene group may be substituted by a C_{1-3}-alkyl group and/or

one or two methylene groups linked to the imino group may be replaced by a carbonyl group and/or

the methylene group in the 4 position of a 6- or 7-membered cycloalkylimino group may be replaced by an –NH, -N(C_{1-3}-alkyl), -N(benzyl), -N(C_{1-4}-alkoxy-carbonyl) or –O- and/or

a phenyl ring may be fused on via two adjacent carbon atoms of the cycloalkyleneimino group:

a compound of general formula



(VII),

wherein

R^2, R^3, R^5, R^6, R^7 and X are defined as in claim 1,

$R^{1'}$ has the meanings given for R^1 hereinbefore or denotes a protective group for the nitrogen atom of the lactam group, while $R^{1'}$ may also denote a bond to a solid phase optionally formed via a spacer,
n denotes the number 1, 2, 3 or 4 and
Z^2 denotes a leaving group, for example a halogen atom or an alkyl or arylsulphonyloxy group such as the chlorine, bromine or iodine atom or the methylsulphonyloxy, ethylsulphonyloxy, p-toluenesulphonyloxy, or trifluoromethanesulphonyloxy group,
is reacted with a hydroxide base such as sodium or potassium hydroxide or a compound of general formula

$$H— R^{8'} \qquad (VIII),$$

wherein

$R^{8'}$ denotes a C_{1-3}-alkyloxy, amino, (C_{1-3}-alkyl)-amino, di-(C_{1-3}-alkyl)-amino, (ω-hydroxy-C_{2-3}-alkyl)-amino, di-(ω-hydroxy-C_{2-3}-alkyl)-amino, (ω-alkoxy-C_{2-3}-alkyl)-amino, di-(ω-alkoxy-C_{2-3}-alkyl)-amino, C_{1-3}-alkyl-carbonyl-amino, *N*-benzyl-*N*-C_{1-3}-alkyl-amino, *N*-[di-(C_{1-3}-alkyl)-amino-C_{1-3}-alkyl]-*N*-C_{1-3}-alkyl-amino or a 5- to 7-membered cycloalkyleneimino group,

while the cycloalkylene group may be substituted by a C_{1-3}-alkyl group and/or

one or two methylene groups linked to the imino group may be replaced by a carbonyl group and/or

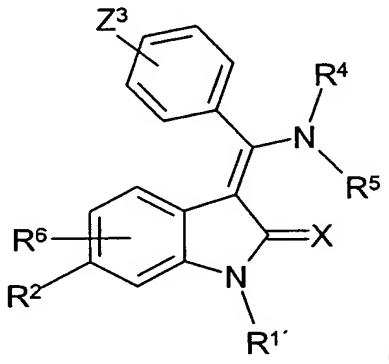
the methylene group in the 4 position of a 6- or 7-membered cycloalkylimino group may be replaced by a -NH, -N(C_{1-3}-alkyl), -N(benzyl), -N(C_{1-4}-alkoxy-carbonyl) or –O- and/or

a phenyl ring may be fused on via two adjacent carbon atoms of the cycloalkyleneimino group,

and if necessary any protective group used for the nitrogen atom of the lactam group is subsequently cleaved or any protective group used is subsequently cleaved from a solid phase,

c. in order to prepare a compound of general formula I wherein R^3 denotes a phenyl or naphthyl group substituted by a carboxy-C_{2-3}-alkenyl, amino-carbonyl-C_{2-3}-alkenyl, (C_{1-3}-alkylamino)-carbonyl-C_{2-3}-alkenyl, di-(C_{1-3}-alkyl-amino)-carbonyl-C_{2-3}-alkenyl or C_{1-4}-alkoxy-carbonyl-C_{2-3}-alkenyl group,

a compound of general formula



(IX),

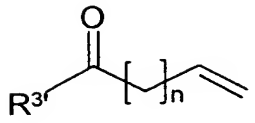
wherein

R^2, R^4, R^5, R^6 and X are defined as in claim 1,

$R^{1'}$ has the meanings given for R^1 hereinbefore or denotes a protective group for the nitrogen atom of the lactam group, while $R^{1'}$ may also denote a bond to a solid phase optionally formed via a spacer, and

Z^3 denotes a leaving group, for example a halogen atom or an alkyl or arylsulphonyloxy group such as the chlorine, bromine or iodine atom or the methylsulphonyloxy, ethylsulphonyloxy, p-toluenesulphonyloxy or trifluoromethanesulphonyloxy group,

is reacted with an alkene of general formula



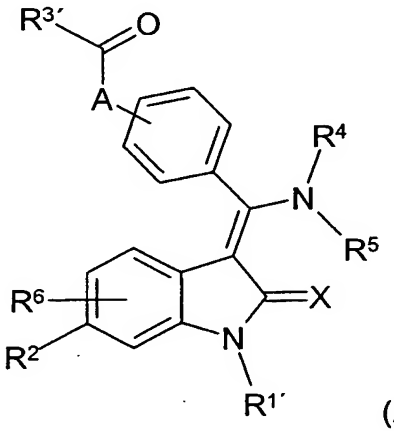
(X),

wherein

$R^{3'}$ denotes an amino, (C_{1-3}-alkylamino), di-(C_{1-3}-alkylamino) or C_{1-4}-alkoxy-group and n is the number 0 or 1,

d. in order to prepare a compound of general formula I wherein R^3 denotes a phenyl or naphthyl group substituted by a carboxy-C_{1-3}-alkyl, C_{1-4}-alkoxy-carbonyl-C_{1-3}-alkyl, aminocarbonyl-C_{1-3}-alkyl, (C_{1-3}-alkylamino)-carbonyl-C_{1-3}-alkyl, di-(C_{1-3}-alkyl)-aminocarbonyl-C_{1-3}-alkyl or 4-(C_{1-3}-alkyl)-piperazin-1-yl-carbonyl-(C_{1-3}-alkyl) group,

a compound of general formula



(XI),

wherein

R^2, R^4, R^5, R^6 and X are defined as in claim 1,

$R^{1'}$ has the meanings given for R^1 hereinbefore or denotes a protective group for the nitrogen atom of the lactam group, while $R^{1'}$ may also denote a bond to a solid phase optionally formed via a spacer,

A denotes a C_{2-3}-alkenyl group and

$R^{3'}$ denotes a hydroxy, C_{1-4}-alkoxy, amino, (C_{1-3}-alkylamino), di-(C_{1-3}-alkyl)-amino or 4-(C_{1-3}-alkyl)-piperazin-1-yl group,

is hydrogenated

and subsequently any protective group which may be used for the nitrogen atom of the lactam group is cleaved or is cleaved from a solid phase as described in process (a) described hereinbefore,

and then an alkoxycarbonyl group is optionally converted by hydrolysis into a corresponding carboxy compound, or

an amino or alkylamino group is converted by reductive alkylation into a corresponding alkylamino or dialkylamino compound, or

a dialkylamino group is converted by alkylation into a corresponding trialkylammonium compound, or

an amino or alkylamino group is converted by acylation or sulphonation into a corresponding acyl or sulphonyl compound, or

a carboxy group is converted by esterification or amidation into a corresponding ester or aminocarbonyl compound, or

a cycloalkyleneimino group wherein a methylene group is replaced by a sulphur atom is converted by oxidation into a corresponding sulphinyl or sulphonyl compound, or

a nitro group is converted by reduction into a corresponding amino compound, or

a cyano group is converted by reduction into a corresponding aminomethyl compound, or

an arylalkyloxy group is converted using acid into a corresponding hydroxy compound, or

an alkoxycarbonyl group is converted by saponification into a corresponding carboxy compound, or

a phenyl group substituted by an amino, alkylamino, aminoalkyl or N-alkyl-amino group is converted by reaction with a corresponding cyanate, isocyanate or carbamoylhalide into a corresponding urea compound of general formula I, or

a carbonyl group is converted by reaction with phosphorus pentasulphide into a corresponding thiocarbonyl compound, or

a phenyl group substituted by an amino, alkylamino, aminoalkyl or N-alkyl-amino group is converted by reaction with a corresponding compound which transfers the amidino group or by reaction with a corresponding nitrile into a corresponding guanidino compound of general formula I.